

# Central Valley Dairy Representative Monitoring Program Year 8 Annual Report (2019)



Part IV of V

*Prepared by*



**Luhdorff & Scalmanini**  
Consulting Engineers

*April 1, 2020*



# Attachment B2

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Laboratory Reports, 2019Q1



2019Q1

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## North Area

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Date of Report: 03/08/2019

Jeanette Kinzie

Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Client Project: Brentwood Farms  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1904659  
Invoice ID: B332279

Enclosed are the results of analyses for samples received by the laboratory on 2/13/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000856890

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1904659

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



19-04659

BC Laboratories, Inc.

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

Chain of Custody

Report to:

Name: Lufdorf and Scalmanini  
Address: 500 First Street  
City: Woodland  
State: 95695  
CA  
Attn: Till Angermann  
Project: Daily Representative Monitoring Program  
Site: Brentwood Farms  
Samplers Name: Edward Her  
Global ID - WDR10038422

Analysis Requested

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qi Pp Unpreserved	From Filtered Sample:	From Filtered Sample:	From Unfiltered Sample:
						Ammonia-N, NO3-N, NO2-N	Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
1	BRE-MW1s, BRE-MW1d	2/12/19	1045	W	X	X	X	X
2	BRE-MW2s, BRE-MW2d	1125		W	X	X	X	X
3	BRE-MW3s, BRE-MW3d	1210		W	X	X	X	X
4	Field Duplicate #3			W	X	X	X	X
5								
6								
7								
8								
9								
10								

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Lufdorf and Scalmanini Consulting Engineers via email: llavagnino@lscce.com, lbryson@lscce.com, pohnalval@lscce.com, jlovetta@lscce.com  
 4) Send invoices to Jeanette Lovetts (jlovetta@lscce.com).

Relinquished by: (Signature) [Signature]  
 Relinquished by: (Signature) [Signature]  
 Relinquished by: (Signature) [Signature]

Received By: [Signature] Date & Time: 2/12/19 1525  
 Received by: [Signature] Date & Time: 2/12/19 1540  
 Received By: [Signature] Date & Time: 2/13/19 0800

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-04659

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) gse

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.97 Container: PE Thermometer ID: 274 Date/Time: 2-13-19  
 Temperature: (A) 0.6 °C / (C) 1.0 °C Analyst Init: MLG

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B	B						
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/618/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 54E										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: ML Date/Time: 2/13/19 1826  
 A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/08/2019 14:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Brentwood Farms  
**Project Manager:** Jeanette Kinzie

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1904659-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/13/2019 08:00
	<b>Project Number:</b> Brentwood Farms	<b>Sampling Date:</b> 02/12/2019 10:45
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> BRE-MW1s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1904659-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/13/2019 08:00
	<b>Project Number:</b> Brentwood Farms	<b>Sampling Date:</b> 02/12/2019 11:25
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> BRE-MW2s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1904659-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/13/2019 08:00
	<b>Project Number:</b> Brentwood Farms	<b>Sampling Date:</b> 02/12/2019 12:10
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> BRE-MW3s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1904659-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/13/2019 08:00
	<b>Project Number:</b> Brentwood Farms	<b>Sampling Date:</b> 02/12/2019 00:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Field Duplicate #3	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

Reported: 03/08/2019 14:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Brentwood Farms  
Project Manager: Jeanette Kinzie

### Water Analysis (General Chemistry)

BCL Sample ID: 1904659-01		Client Sample Name: Brentwood Farms, BRE-MW1s, 2/12/2019 10:45:00AM, Edward Her						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	25	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	25	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	22	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.64	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	120	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	17	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	8.2	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	37	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	280	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.19	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.49	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 11:43	02/22/19 13:57	JRG	PE-OP2	1	B038379
2	SM-2320B	02/14/19 08:00	02/14/19 12:56	MEV	MET-1	1	B031694
3	EPA-300.0	02/13/19 17:00	02/13/19 20:42	KEB	IC2	1	B037692
4	SM-2540C	02/14/19 12:30	02/14/19 12:30	NW1	MANUAL	2	B037747
5	EPA-351.2	02/19/19 20:30	02/20/19 12:52	JMH	SC-1	1	B038058
6	EPA-350.1	02/25/19 11:51	02/25/19 14:21	JMH	SC-1	1	B038263
7	EPA-353.2	02/13/19 15:28	02/13/19 15:32	MC1	KONE-1	1	B037806
8	EPA-365.4	02/19/19 20:30	02/22/19 09:27	JMH	SC-1	1	B038059

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/08/2019 14:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Brentwood Farms  
**Project Manager:** Jeanette Kinzie

### Water Analysis (General Chemistry)

BCL Sample ID: 1904659-02		Client Sample Name: Brentwood Farms, BRE-MW2s, 2/12/2019 11:25:00AM, Edward Her						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	27	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	17	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	22	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.74	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	120	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	21	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	4.2	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	12	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	240	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.17	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	0.063	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	4.0	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 11:43	02/22/19 14:26	JRG	PE-OP2	1	B038379
2	SM-2320B	02/14/19 08:00	02/14/19 13:02	MEV	MET-1	1	B031694
3	EPA-300.0	02/13/19 17:00	02/13/19 21:03	KEB	IC2	1	B037692
4	SM-2540C	02/14/19 12:30	02/14/19 12:30	NW1	MANUAL	2	B037747
5	EPA-351.2	02/19/19 20:30	02/20/19 12:55	JMH	SC-1	1	B038058
6	EPA-350.1	02/25/19 11:51	02/25/19 14:30	JMH	SC-1	1	B038263
7	EPA-353.2	02/13/19 15:28	02/13/19 15:32	MC1	KONE-1	1	B037806
8	EPA-365.4	02/19/19 20:30	02/22/19 09:30	JMH	SC-1	1	B038059

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500 First Street  
Woodland, CA 95695

**Reported:** 03/08/2019 14:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Brentwood Farms  
**Project Manager:** Jeanette Kinzie

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1904659-03	<b>Client Sample Name:</b> Brentwood Farms, BRE-MW3s, 2/12/2019 12:10:00PM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	24	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	14	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	19	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.67	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	120	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	12	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	2.7	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	9.2	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	200	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.31	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.6	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 11:43	02/22/19 14:29	JRG	PE-OP2	1	B038379
2	SM-2320B	02/14/19 08:00	02/14/19 13:08	MEV	MET-1	1	B031694
3	EPA-300.0	02/13/19 17:00	02/13/19 22:05	KEB	IC2	1	B037692
4	SM-2540C	02/14/19 13:00	02/14/19 13:00	NW1	MANUAL	2	B037750
5	EPA-351.2	02/19/19 20:30	02/20/19 12:57	JMH	SC-1	1	B038058
6	EPA-350.1	02/25/19 11:51	02/25/19 14:30	JMH	SC-1	1	B038263
7	EPA-353.2	02/13/19 15:28	02/13/19 15:32	MC1	KONE-1	1	B037806
8	EPA-365.4	02/19/19 20:30	02/22/19 09:30	JMH	SC-1	1	B038059

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500 First Street  
Woodland, CA 95695

Reported: 03/08/2019 14:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Brentwood Farms  
Project Manager: Jeanette Kinzie

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1904659-04	<b>Client Sample Name:</b> Brentwood Farms, Field Duplicate #3, 2/12/2019 12:00:00AM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	27	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	17	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	22	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.80	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	130	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	22	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	4.4	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	13	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	240	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.28	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	3.3	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 11:43	02/22/19 14:37	JRG	PE-OP2	1	B038379
2	SM-2320B	02/14/19 08:00	02/14/19 12:25	MEV	MET-1	1	B031694
3	EPA-300.0	02/13/19 17:00	02/14/19 07:01	SAV	IC2	1	B037692
4	SM-2540C	02/14/19 13:00	02/14/19 13:00	NW1	MANUAL	2	B037750
5	EPA-351.2	02/19/19 20:30	02/20/19 12:59	JMH	SC-1	1	B038058
6	EPA-350.1	02/25/19 11:51	02/25/19 14:31	JMH	SC-1	1	B038263
7	EPA-353.2	02/13/19 15:28	02/13/19 15:32	MC1	KONE-1	1	B037806
8	EPA-365.4	02/19/19 20:30	02/22/19 09:32	JMH	SC-1	1	B038059

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/08/2019 14:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Brentwood Farms  
**Project Manager:** Jeanette Kinzie

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031694</b>						
Bicarbonate Alkalinity as CaCO3	B031694-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031694-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031694-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B037692</b>						
Chloride	B037692-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B037692-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B037692-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B037747</b>						
Total Dissolved Solids @ 180 C	B037747-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B037750</b>						
Total Dissolved Solids @ 180 C	B037750-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B037806</b>						
Nitrite as N	B037806-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038058</b>						
Total Kjeldahl Nitrogen	B038058-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B038059</b>						
Total Phosphate	B038059-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B038263</b>						
Ammonia as N	B038263-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B038379</b>						
Dissolved Calcium	B038379-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038379-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038379-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038379-BLK1	ND	mg/L	1.0	0.10	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/08/2019 14:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Brentwood Farms  
**Project Manager:** Jeanette Kinzie

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B037692</b>										
Chloride	B037692-BS1	LCS	50.611	50.000	mg/L	101		90 - 110		
Nitrate as N	B037692-BS1	LCS	4.9510	5.0000	mg/L	99.0		90 - 110		
Sulfate	B037692-BS1	LCS	100.02	100.00	mg/L	100		90 - 110		
<b>QC Batch ID: B037747</b>										
Total Dissolved Solids @ 180 C	B037747-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B037750</b>										
Total Dissolved Solids @ 180 C	B037750-BS1	LCS	575.00	586.00	mg/L	98.1		90 - 110		
<b>QC Batch ID: B037806</b>										
Nitrite as N	B037806-BS1	LCS	0.49350	0.50000	mg/L	98.7		90 - 110		
<b>QC Batch ID: B038058</b>										
Total Kjeldahl Nitrogen	B038058-BS1	LCS	1.8789	2.0000	mg/L	93.9		90 - 110		
<b>QC Batch ID: B038059</b>										
Total Phosphate	B038059-BS1	LCS	3.0806	3.0660	mg/L	100		85 - 115		
<b>QC Batch ID: B038263</b>										
Ammonia as N	B038263-BS1	LCS	0.95680	1.0000	mg/L	95.7		90 - 110		
<b>QC Batch ID: B038379</b>										
Dissolved Calcium	B038379-BS1	LCS	10.130	10.000	mg/L	101		85 - 115		
Dissolved Magnesium	B038379-BS1	LCS	10.251	10.000	mg/L	103		85 - 115		
Dissolved Sodium	B038379-BS1	LCS	9.2901	10.000	mg/L	92.9		85 - 115		
Dissolved Potassium	B038379-BS1	LCS	9.5719	10.000	mg/L	95.7		85 - 115		

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500 First Street  
Woodland, CA 95695

Reported: 03/08/2019 14:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Brentwood Farms  
Project Manager: Jeanette Kinzie

### Water Analysis (General Chemistry) Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B031694</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1904659-04	126.42	124.60		mg/L	1.5		10	
Carbonate Alkalinity as CaCO3	DUP	1904659-04	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1904659-04	ND	ND		mg/L			10	
<b>QC Batch ID: B037692</b>		Used client sample: N								
Chloride	DUP	1904650-01	54.581	54.740		mg/L	0.3		10	
	MS	1904650-01	54.581	107.90	50.505	mg/L		106		80 - 120
	MSD	1904650-01	54.581	108.03	50.505	mg/L	0.1	106	10	80 - 120
Nitrate as N	DUP	1904650-01	6.7470	6.7930		mg/L	0.7		10	
	MS	1904650-01	6.7470	11.899	5.0505	mg/L		102		80 - 120
	MSD	1904650-01	6.7470	11.887	5.0505	mg/L	0.1	102	10	80 - 120
Sulfate	DUP	1904650-01	124.73	125.17		mg/L	0.4		10	
	MS	1904650-01	124.73	231.34	101.01	mg/L		106		80 - 120
	MSD	1904650-01	124.73	231.61	101.01	mg/L	0.1	106	10	80 - 120
<b>QC Batch ID: B037747</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1904392-01	935.00	950.00		mg/L	1.6		10	
<b>QC Batch ID: B037750</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1904580-11	536.66	523.33		mg/L	2.5		10	
<b>QC Batch ID: B037806</b>		Used client sample: N								
Nitrite as N	DUP	1904638-01	ND	ND		mg/L			10	
	MS	1904638-01	ND	0.50801	0.50000	mg/L		102		90 - 110
	MSD	1904638-01	ND	0.50785	0.50000	mg/L	0.0	102	10	90 - 110
<b>QC Batch ID: B038058</b>		Used client sample: Y - Description: BRE-MW1s, 02/12/2019 10:45								
Total Kjeldahl Nitrogen	DUP	1904659-01	0.18890	0.13780		mg/L	31.3		20	J,A02
	MS	1904659-01	0.18890	2.1360	2.0000	mg/L		97.4		90 - 110
	MSD	1904659-01	0.18890	2.1628	2.0000	mg/L	1.2	98.7	20	90 - 110
<b>QC Batch ID: B038059</b>		Used client sample: Y - Description: BRE-MW1s, 02/12/2019 10:45								
Total Phosphate	DUP	1904659-01	0.48998	0.50562		mg/L	3.1		20	
	MS	1904659-01	0.48998	3.6960	3.0660	mg/L		105		80 - 120
	MSD	1904659-01	0.48998	3.6442	3.0660	mg/L	1.4	103	20	80 - 120
<b>QC Batch ID: B038263</b>		Used client sample: Y - Description: BRE-MW1s, 02/12/2019 10:45								
Ammonia as N	DUP	1904659-01	ND	ND		mg/L			10	
	MS	1904659-01	ND	1.0602	1.1111	mg/L		95.4		90 - 110
	MSD	1904659-01	ND	1.1218	1.1111	mg/L	5.6	101	10	90 - 110
<b>QC Batch ID: B038379</b>		Used client sample: Y - Description: BRE-MW1s, 02/12/2019 10:45								

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/08/2019 14:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Brentwood Farms  
**Project Manager:** Jeanette Kinzie

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
<b>QC Batch ID: B038379</b>		Used client sample: Y - Description: BRE-MW1s, 02/12/2019 10:45									
Dissolved Calcium	DUP	1904659-01	25.220	25.163		mg/L	0.2		20		
	MS	1904659-01	25.220	35.732	10.204	mg/L		103		85 - 115	
	MSD	1904659-01	25.220	35.634	10.204	mg/L	0.3	102	20	85 - 115	
Dissolved Magnesium	DUP	1904659-01	24.600	24.185		mg/L	1.7		20		
	MS	1904659-01	24.600	34.848	10.204	mg/L		100		85 - 115	
	MSD	1904659-01	24.600	34.726	10.204	mg/L	0.4	99.2	20	85 - 115	
Dissolved Sodium	DUP	1904659-01	22.267	22.206		mg/L	0.3		20		
	MS	1904659-01	22.267	32.505	10.204	mg/L		100		85 - 115	
	MSD	1904659-01	22.267	32.435	10.204	mg/L	0.2	99.6	20	85 - 115	
Dissolved Potassium	DUP	1904659-01	0.64371	0.62775		mg/L	2.5		20		J
	MS	1904659-01	0.64371	10.624	10.204	mg/L		97.8		85 - 115	
	MSD	1904659-01	0.64371	10.700	10.204	mg/L	0.7	98.6	20	85 - 115	

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Woodland, CA 95695

**Reported:** 03/08/2019 14:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Brentwood Farms  
**Project Manager:** Jeanette Kinzie

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.







Date of Report: 03/04/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Creekside Silveira Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1904817  
Invoice ID: B332557

Enclosed are the results of analyses for samples received by the laboratory on 2/14/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1904817

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.

<b>BC Laboratories, Inc.</b>			<b>Chain of Custody</b>		
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911					
<b>Report to:</b>					
Expanded Constituent Suite					
Project: Dairy Representative Monitoring Program					
Site: Creekside Stevira Dairy					
Samplers Name: Edward He					
Global ID - WDR-100038237					
<b>Analysis Requested</b>					
Name: Luhdorff and Scalmanini		From Filtered Sample: Na, K, Mg, Ca, Cl, SO <sub>4</sub> (as SO <sub>4</sub> ), Total Dissolved Solids		From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO <sub>4</sub> ), Alkalinity (HCO <sub>3</sub> , CO <sub>3</sub> & OH) as CaCO <sub>3</sub>	
Address: 500 First Street		From Filtered Sample: Ammonia-N, NO <sub>3</sub> -N, NO <sub>2</sub> -N			
City: Woodland					
State: 95695					
Attn: Till Angermann					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qt Pe Unpreserved
1	CRE-MW1s, CRE-MW1d	2/13/19	1:25	W	x
2	CRE-MW2s, CRE-MW2d		1:05	W	x
3	CRE-MW3s, CRE-MW3d		0:30	W	x
4	Field Duplicate				x
5					x
6					x
7					x
8					x
9					x
10					x
CHK-BY: [Signature]      DISTRIBUTION: [Signature]      SUB-OUT: [Signature]					
Comments: 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lscce.com, rbryson@lscce.com, pdheltwa@lscce.com, jlovelis@lscce.com 4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).					
Relinquished by: [Signature]		Relinquished by: [Signature]		Relinquished by: [Signature]	
Date & Time: 2/13/19 1525		Date & Time: 2/13/19 1535		Date & Time: 2/14/19 0830	
Received by: [Signature]		Received by: [Signature]		Received by: [Signature]	

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-04817

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) gse

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.97 Container: PE Thermometer ID: 274 Date/Time: 2/14/19 08:30

Temperature: (A) 0.4 °C / (C) 0.8 °C Analyst Init: kjg

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B							
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/508/5080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
1oz EPA 548										
YT EPA 549										
YT EPA 8015M										
YT EPA 8270										
oz / 16oz / 32oz AMBER										
oz / 16oz / 32oz JAR										
OIL SLEEVE										
CB VIAL										
LASTIC BAG										
EDLAR BAG										
FERROUS IRON										
VCORE										
4ART KIT										
MMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: COA Date/Time: 10:5 2/14/19 Rev 21 05/23/2016

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 17:35  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1904817-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/14/2019 08:30
	<b>Project Number:</b>	Creekside Silveira Dairy	<b>Sampling Date:</b>	02/13/2019 10:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CRE-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of DTO	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1904817-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/14/2019 08:30
	<b>Project Number:</b>	Creekside Silveira Dairy	<b>Sampling Date:</b>	02/13/2019 11:05
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CRE-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of DTO	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1904817-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/14/2019 08:30
	<b>Project Number:</b>	Creekside Silveira Dairy	<b>Sampling Date:</b>	02/13/2019 09:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CRE-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of DTO	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/04/2019 17:35  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Creekside Silveira Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1904817-01	<b>Client Sample Name:</b> Creekside Silveira Dairy, CRE-MW1s, 2/13/2019 10:30:00AM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	84	mg/L	0.10	0.016	EPA-200.7	0.042		1
Dissolved Magnesium	88	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	73	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.8	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	320	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	52	mg/L	0.50	0.10	EPA-300.0	ND	A07	4
Sulfate	84	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	770	mg/L	50	25	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.39	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.10	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	0.16	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/15/19 12:20	02/25/19 20:27	JRG	PE-OP2	1	B038574
2	SM-2320B	02/15/19 06:30	02/15/19 09:11	MEV	MET-1	2	B031698
3	EPA-300.0	02/14/19 12:00	02/14/19 16:53	KEB	IC5	2	B037764
4	EPA-300.0	02/14/19 12:00	02/14/19 19:38	KEB	IC5	5	B037764
5	SM-2540C	02/15/19 12:45	02/15/19 12:45	NW1	MANUAL	5	B037810
6	EPA-351.2	02/20/19 20:30	02/22/19 14:19	JMH	SC-1	1	B038170
7	EPA-350.1	03/01/19 12:43	03/01/19 14:58	JMH	SC-1	1	B039015
8	EPA-353.2	02/14/19 15:29	02/14/19 15:29	MC1	KONE-1	1	B037831
9	EPA-365.4	02/20/19 20:30	02/25/19 12:58	JMH	SC-1	1	B038171

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500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 17:35  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1904817-02	<b>Client Sample Name:</b> Creekside Silveira Dairy, CRE-MW2s, 2/13/2019 11:05:00AM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	58	mg/L	0.10	0.016	EPA-200.7	0.042		1
Dissolved Magnesium	58	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	75	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.1	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	230	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	96	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	28	mg/L	0.20	0.042	EPA-300.0	ND	A07	4
Sulfate	100	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	600	mg/L	33	17	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.58	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.071	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	0.85	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/15/19 12:22	02/25/19 20:46	JRG	PE-OP2	1	B038574
2	SM-2320B	02/15/19 06:30	02/15/19 10:29	MEV	MET-1	2	B031699
3	EPA-300.0	02/14/19 12:00	02/14/19 17:15	KEB	IC5	1	B037764
4	EPA-300.0	02/14/19 12:00	02/14/19 17:33	KEB	IC5	2	B037764
5	SM-2540C	02/15/19 12:45	02/15/19 12:45	NW1	MANUAL	3.333	B037810
6	EPA-351.2	02/20/19 20:30	02/22/19 14:20	JMH	SC-1	1	B038170
7	EPA-350.1	03/01/19 12:43	03/01/19 15:02	JMH	SC-1	1	B039015
8	EPA-353.2	02/14/19 15:29	02/14/19 15:29	MC1	KONE-1	1	B037831
9	EPA-365.4	02/20/19 20:30	02/25/19 12:59	JMH	SC-1	1	B038171

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 17:35  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1904817-03	<b>Client Sample Name:</b> Creekside Silveira Dairy, CRE-MW3s, 2/13/2019 9:30:00AM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	120	mg/L	0.10	0.016	EPA-200.7	0.042		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	74	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.92	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	700	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	0.51	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	46	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	840	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.44	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.099	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.98	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/15/19 12:25	02/25/19 20:48	JRG	PE-OP2	1	B038574
2	SM-2320B	02/15/19 06:30	02/15/19 10:41	MEV	MET-1	2	B031699
3	EPA-300.0	02/14/19 12:00	02/14/19 21:08	KEB	IC5	1	B037764
4	SM-2540C	02/15/19 12:45	02/15/19 12:45	NW1	MANUAL	5	B037810
5	EPA-351.2	02/20/19 20:30	02/22/19 14:21	JMH	SC-1	1	B038170
6	EPA-350.1	03/01/19 12:43	03/01/19 15:03	JMH	SC-1	1	B039015
7	EPA-353.2	02/14/19 15:29	02/14/19 15:29	MC1	KONE-1	1	B037831
8	EPA-365.4	02/20/19 20:30	02/25/19 12:59	JMH	SC-1	1	B038171

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500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 17:35  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031698</b>						
Bicarbonate Alkalinity as CaCO3	B031698-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031698-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031698-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031699</b>						
Bicarbonate Alkalinity as CaCO3	B031699-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031699-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031699-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B037764</b>						
Chloride	B037764-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B037764-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B037764-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B037810</b>						
Total Dissolved Solids @ 180 C	B037810-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B037831</b>						
Nitrite as N	B037831-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038170</b>						
Total Kjeldahl Nitrogen	B038170-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B038171</b>						
Total Phosphate	B038171-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B038574</b>						
Dissolved Calcium	B038574-BLK1	0.041742	mg/L	0.10	0.016	J
Dissolved Magnesium	B038574-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038574-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038574-BLK2	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039015</b>						
Ammonia as N	B039015-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 17:35  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B037764</b>										
Chloride	B037764-BS1	LCS	50.639	50.000	mg/L	101		90 - 110		
Nitrate as N	B037764-BS1	LCS	5.0760	5.0000	mg/L	102		90 - 110		
Sulfate	B037764-BS1	LCS	100.09	100.00	mg/L	100		90 - 110		
<b>QC Batch ID: B037810</b>										
Total Dissolved Solids @ 180 C	B037810-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B037831</b>										
Nitrite as N	B037831-BS1	LCS	0.49988	0.50000	mg/L	100		90 - 110		
<b>QC Batch ID: B038170</b>										
Total Kjeldahl Nitrogen	B038170-BS1	LCS	2.0832	2.0000	mg/L	104		90 - 110		
<b>QC Batch ID: B038171</b>										
Total Phosphate	B038171-BS1	LCS	3.0282	3.0660	mg/L	98.8		85 - 115		
<b>QC Batch ID: B038574</b>										
Dissolved Calcium	B038574-BS1	LCS	10.392	10.000	mg/L	104		85 - 115		
Dissolved Magnesium	B038574-BS1	LCS	10.234	10.000	mg/L	102		85 - 115		
Dissolved Sodium	B038574-BS1	LCS	9.4667	10.000	mg/L	94.7		85 - 115		
Dissolved Potassium	B038574-BS2	LCS	9.1463	10.000	mg/L	91.5		85 - 115		
<b>QC Batch ID: B039015</b>										
Ammonia as N	B039015-BS1	LCS	0.94350	1.0000	mg/L	94.4		90 - 110		

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500 First Street  
Woodland, CA 95695

Reported: 03/04/2019 17:35  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Creekside Silveira Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B031698</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1904817-01	315.52	319.78		mg/L	1.3		10	
Carbonate Alkalinity as CaCO3	DUP	1904817-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1904817-01	ND	ND		mg/L			10	
<b>QC Batch ID: B031699</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1904817-02	225.76	221.50		mg/L	1.9		10	
Carbonate Alkalinity as CaCO3	DUP	1904817-02	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1904817-02	ND	ND		mg/L			10	
<b>QC Batch ID: B037764</b>		Used client sample: N								
Chloride	DUP	1904803-01	13.473	13.434		mg/L	0.3		10	
	MS	1904803-01	13.473	66.632	50.505	mg/L		105		80 - 120
	MSD	1904803-01	13.473	67.110	50.505	mg/L	0.7	106	10	80 - 120
Nitrate as N	DUP	1904803-01	2.8540	2.8680		mg/L	0.5		10	
	MS	1904803-01	2.8540	8.1404	5.0505	mg/L		105		80 - 120
	MSD	1904803-01	2.8540	7.9495	5.0505	mg/L	2.4	101	10	80 - 120
Sulfate	DUP	1904803-01	7.8810	7.8100		mg/L	0.9		10	
	MS	1904803-01	7.8810	109.27	101.01	mg/L		100		80 - 120
	MSD	1904803-01	7.8810	109.26	101.01	mg/L	0.0	100	10	80 - 120
<b>QC Batch ID: B037810</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1904817-01	770.00	780.00		mg/L	1.3		10	
<b>QC Batch ID: B037831</b>		Used client sample: Y - Description: CRE-MW1s, 02/13/2019 10:30								
Nitrite as N	DUP	1904817-01	ND	ND		mg/L			10	
	MS	1904817-01	ND	0.51559	0.52632	mg/L		98.0		90 - 110
	MSD	1904817-01	ND	0.52251	0.52632	mg/L	1.3	99.3	10	90 - 110
<b>QC Batch ID: B038170</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1904774-01	0.51890	0.46330		mg/L	11.3		20	
	MS	1904774-01	0.51890	2.6049	2.0000	mg/L		104		90 - 110
	MSD	1904774-01	0.51890	2.6356	2.0000	mg/L	1.2	106	20	90 - 110
<b>QC Batch ID: B038171</b>		Used client sample: N								
Total Phosphate	DUP	1904774-01	0.48538	0.49642		mg/L	2.2		20	
	MS	1904774-01	0.48538	3.6101	3.0660	mg/L		102		80 - 120
	MSD	1904774-01	0.48538	3.5559	3.0660	mg/L	1.5	100	20	80 - 120
<b>QC Batch ID: B038574</b>		Used client sample: Y - Description: CRE-MW1s, 02/13/2019 10:30								
Dissolved Calcium	DUP	1904817-01	84.373	82.843		mg/L	1.8		20	
	MS	1904817-01	84.373	94.947	10.204	mg/L		104		85 - 115
	MSD	1904817-01	84.373	94.755	10.204	mg/L	0.2	102	20	85 - 115

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 17:35  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B038574</b>		Used client sample: Y - Description: CRE-MW1s, 02/13/2019 10:30								
Dissolved Magnesium	DUP	1904817-01	87.681	85.965		mg/L	2.0		20	
	MS	1904817-01	87.681	98.111	10.204	mg/L		102		85 - 115
	MSD	1904817-01	87.681	97.981	10.204	mg/L	0.1	101	20	85 - 115
Dissolved Sodium	DUP	1904817-01	72.943	71.185		mg/L	2.4		20	
	MS	1904817-01	72.943	83.610	10.204	mg/L		105		85 - 115
	MSD	1904817-01	72.943	83.847	10.204	mg/L	0.3	107	20	85 - 115
Dissolved Potassium	DUP	1904817-01	1.7984	1.7568		mg/L	2.3		20	
	MS	1904817-01	1.7984	11.853	10.204	mg/L		98.5		85 - 115
	MSD	1904817-01	1.7984	11.728	10.204	mg/L	1.1	97.3	20	85 - 115
<b>QC Batch ID: B039015</b>		Used client sample: Y - Description: CRE-MW1s, 02/13/2019 10:30								
Ammonia as N	DUP	1904817-01	<b>0.099600</b>	<b>0.073300</b>		mg/L	<b>30.4</b>		<b>10</b>	<b>J,A02</b>
	MS	1904817-01	<b>0.099600</b>	<b>1.2431</b>	<b>1.1111</b>	mg/L		<b>103</b>		<b>90 - 110</b>
	MSD	1904817-01	<b>0.099600</b>	<b>1.2786</b>	<b>1.1111</b>	mg/L	<b>2.8</b>	<b>106</b>	<b>10</b>	<b>90 - 110</b>

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500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 17:35  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 03/04/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: MTSJ Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1904818

Invoice ID: B332562

Enclosed are the results of analyses for samples received by the laboratory on 2/14/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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**1904818-01 - MTS-MW1**

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## Case Narratives

### Case Narrative for Work Order 1904818

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		19-04818		Chain of Custody	
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911					
<b>Report to:</b>					
Expanded Constituent Suite					
Project: Dairy Representative Monitoring Program					
Site: MTSJ Dairy					
Samplers Name: <i>Edward H.</i>					
Global ID - WDR100039114					
Name: Lohdorff and Scalmanini					
Address: 500 First Street					
City: Woodland					
State: 95685					
Attn: Till Angermann					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl/Pe Unpreserved
1	MTS-MW1	2/13/19	1345	W	X
2	MTS-MW25, MTS-MW2d				X
3	MTS-MW3s, MTS-MW3d				X
4	Field Duplicate				X
5					X
6					X
7					X
8					X
9					X
10					X
<b>Analysis Requested</b> From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids From Filtered Sample: Ammonia-N, NO3-N, NO2-N From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3					
<b>CHK BY DISTRIBUTION</b> <input checked="" type="checkbox"/> COT <input checked="" type="checkbox"/> NO2 <input checked="" type="checkbox"/> NO3 <input checked="" type="checkbox"/> GP <input checked="" type="checkbox"/> SS <input checked="" type="checkbox"/> BOD <input checked="" type="checkbox"/> MEAS <input checked="" type="checkbox"/> COT					
<b>Comments:</b> 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Lohdorff and Scalmanini Consulting Engineers via email: jlavagnino@lscs.com, rtrysan@lscs.com, pothermal@lscs.com, jlavagnino@lscs.com 4) Send invoices to Jeanette Lovells (jlovells@lscs.com). (A)= Analyst (C)= Container (P)= Preservative					
<b>Relinquished by: (Signature)</b> <i>[Signature]</i>					
<b>Relinquished by: (Signature)</b> <i>[Signature]</i>					
<b>Relinquished by: (Signature)</b> <i>[Signature]</i>					
<b>Received By:</b> <i>[Signature]</i> Date & Time: 2/13/19 1525 <b>Received by:</b> <i>[Signature]</i> Date & Time: 2/13/19 1535 <b>Received By:</b> <i>[Signature]</i> Date & Time: 2/14/19 0820					

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-04818

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) gse

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.97 Container: PE Thermometer ID: 274 Date/Time: 2/14/19 08:20 Analyst Init: kg

Temperature: (A) 0.4 °C / (C) 0.8 °C

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B									
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/08/8080										
QT EPA 515.16150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
10ml EPA 547										
10ml EPA 531.1										
02 EPA 548										
YT EPA 549										
YT EPA 8015M										
T EPA 8270										
12 / 16oz / 32oz AMBER										
12 / 16oz / 32oz JAR										
1L SLREVE										
2B VIAL										
ASTIC BAG										
IDLAR BAG										
3RROUS IRON										
ICORE										
LART KIT										
MMA CANISTER										

Comments: gse 2/14/19

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 18:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1904818-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/14/2019 08:30
	<b>Project Number:</b>	MTSJ Dairy	<b>Sampling Date:</b>	02/13/2019 13:45
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MTS-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 18:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1904818-01		Client Sample Name: MTSJ Dairy, MTS-MW1, 2/13/2019 1:45:00PM, Edward Her						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	73	mg/L	0.10	0.016	EPA-200.7	0.042		1
Dissolved Magnesium	36	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	28	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.96	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	220	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	30	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	22	mg/L	0.50	0.10	EPA-300.0	ND	A07	4
Sulfate	38	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	410	mg/L	33	17	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.24	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.052	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	1.1	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/15/19 12:30	02/25/19 20:51	JRG	PE-OP2	1	B038574
2	SM-2320B	02/15/19 06:30	02/15/19 10:48	MEV	MET-1	1	B031699
3	EPA-300.0	02/14/19 12:00	02/14/19 18:09	KEB	IC5	2	B037764
4	EPA-300.0	02/14/19 12:00	02/14/19 18:27	KEB	IC5	5	B037764
5	SM-2540C	02/15/19 12:45	02/15/19 12:45	NW1	MANUAL	3.333	B037810
6	EPA-351.2	02/19/19 20:30	02/22/19 14:02	JMH	SC-1	1	B038056
7	EPA-350.1	03/01/19 12:43	03/01/19 15:05	JMH	SC-1	1	B039015
8	EPA-353.2	02/14/19 15:29	02/14/19 15:29	MC1	KONE-1	1	B037831
9	EPA-365.4	02/19/19 20:30	02/25/19 12:50	JMH	SC-1	1	B038057

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Woodland, CA 95695

**Reported:** 03/04/2019 18:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031699</b>						
Bicarbonate Alkalinity as CaCO3	B031699-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031699-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031699-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B037764</b>						
Chloride	B037764-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B037764-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B037764-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B037810</b>						
Total Dissolved Solids @ 180 C	B037810-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B037831</b>						
Nitrite as N	B037831-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038056</b>						
Total Kjeldahl Nitrogen	B038056-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B038057</b>						
Total Phosphate	B038057-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B038574</b>						
Dissolved Calcium	B038574-BLK1	0.041742	mg/L	0.10	0.016	J
Dissolved Magnesium	B038574-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038574-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038574-BLK2	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039015</b>						
Ammonia as N	B039015-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/04/2019 18:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B037764</b>										
Chloride	B037764-BS1	LCS	50.639	50.000	mg/L	101		90 - 110		
Nitrate as N	B037764-BS1	LCS	5.0760	5.0000	mg/L	102		90 - 110		
Sulfate	B037764-BS1	LCS	100.09	100.00	mg/L	100		90 - 110		
<b>QC Batch ID: B037810</b>										
Total Dissolved Solids @ 180 C	B037810-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B037831</b>										
Nitrite as N	B037831-BS1	LCS	0.49988	0.50000	mg/L	100		90 - 110		
<b>QC Batch ID: B038056</b>										
Total Kjeldahl Nitrogen	B038056-BS1	LCS	1.9694	2.0000	mg/L	98.5		90 - 110		
<b>QC Batch ID: B038057</b>										
Total Phosphate	B038057-BS1	LCS	3.1398	3.0660	mg/L	102		85 - 115		
<b>QC Batch ID: B038574</b>										
Dissolved Calcium	B038574-BS1	LCS	10.392	10.000	mg/L	104		85 - 115		
Dissolved Magnesium	B038574-BS1	LCS	10.234	10.000	mg/L	102		85 - 115		
Dissolved Sodium	B038574-BS1	LCS	9.4667	10.000	mg/L	94.7		85 - 115		
Dissolved Potassium	B038574-BS2	LCS	9.1463	10.000	mg/L	91.5		85 - 115		
<b>QC Batch ID: B039015</b>										
Ammonia as N	B039015-BS1	LCS	0.94350	1.0000	mg/L	94.4		90 - 110		

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Reported: 03/04/2019 18:21  
Project: Dairy Rep MP - Expanded Suite  
Project Number: MTSJ Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B031699</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1904817-02	225.76	221.50		mg/L	1.9		10	
Carbonate Alkalinity as CaCO3	DUP	1904817-02	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1904817-02	ND	ND		mg/L			10	
<b>QC Batch ID: B037764</b>		Used client sample: N								
Chloride	DUP	1904803-01	13.473	13.434		mg/L	0.3		10	
	MS	1904803-01	13.473	66.632	50.505	mg/L		105		80 - 120
	MSD	1904803-01	13.473	67.110	50.505	mg/L	0.7	106	10	80 - 120
Nitrate as N	DUP	1904803-01	2.8540	2.8680		mg/L	0.5		10	
	MS	1904803-01	2.8540	8.1404	5.0505	mg/L		105		80 - 120
	MSD	1904803-01	2.8540	7.9495	5.0505	mg/L	2.4	101	10	80 - 120
Sulfate	DUP	1904803-01	7.8810	7.8100		mg/L	0.9		10	
	MS	1904803-01	7.8810	109.27	101.01	mg/L		100		80 - 120
	MSD	1904803-01	7.8810	109.26	101.01	mg/L	0.0	100	10	80 - 120
<b>QC Batch ID: B037810</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1904817-01	770.00	780.00		mg/L	1.3		10	
<b>QC Batch ID: B037831</b>		Used client sample: N								
Nitrite as N	DUP	1904817-01	ND	ND		mg/L			10	
	MS	1904817-01	ND	0.51559	0.52632	mg/L		98.0		90 - 110
	MSD	1904817-01	ND	0.52251	0.52632	mg/L	1.3	99.3	10	90 - 110
<b>QC Batch ID: B038056</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1904763-01	0.55490	0.54030		mg/L	2.7		20	
	MS	1904763-01	0.55490	2.4928	2.0000	mg/L		96.9		90 - 110
	MSD	1904763-01	0.55490	2.3851	2.0000	mg/L	4.4	91.5	20	90 - 110
<b>QC Batch ID: B038057</b>		Used client sample: N								
Total Phosphate	DUP	1904763-01	ND	ND		mg/L			20	
	MS	1904763-01	ND	3.1622	3.0660	mg/L		103		80 - 120
	MSD	1904763-01	ND	3.1493	3.0660	mg/L	0.4	103	20	80 - 120
<b>QC Batch ID: B038574</b>		Used client sample: N								
Dissolved Calcium	DUP	1904817-01	84.373	82.843		mg/L	1.8		20	
	MS	1904817-01	84.373	94.947	10.204	mg/L		104		85 - 115
	MSD	1904817-01	84.373	94.755	10.204	mg/L	0.2	102	20	85 - 115
Dissolved Magnesium	DUP	1904817-01	87.681	85.965		mg/L	2.0		20	
	MS	1904817-01	87.681	98.111	10.204	mg/L		102		85 - 115
	MSD	1904817-01	87.681	97.981	10.204	mg/L	0.1	101	20	85 - 115

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500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 18:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
<b>QC Batch ID: B038574</b>		Used client sample: N									
Dissolved Sodium	DUP	1904817-01	72.943	71.185		mg/L	2.4		20		
	MS	1904817-01	72.943	83.610	10.204	mg/L		105		85 - 115	
	MSD	1904817-01	72.943	83.847	10.204	mg/L	0.3	107	20	85 - 115	
Dissolved Potassium	DUP	1904817-01	1.7984	1.7568		mg/L	2.3		20		
	MS	1904817-01	1.7984	11.853	10.204	mg/L		98.5		85 - 115	
	MSD	1904817-01	1.7984	11.728	10.204	mg/L	1.1	97.3	20	85 - 115	
<b>QC Batch ID: B039015</b>		Used client sample: N									
Ammonia as N	DUP	1904817-01	0.099600	0.073300		mg/L	30.4		10		J,A02
	MS	1904817-01	0.099600	1.2431	1.1111	mg/L		103		90 - 110	
	MSD	1904817-01	0.099600	1.2786	1.1111	mg/L	2.8	106	10	90 - 110	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 18:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.

## South Area

---





Date of Report: 03/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Aukeman Farms  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1905552  
Invoice ID: B333330

Enclosed are the results of analyses for samples received by the laboratory on 2/20/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905552

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.







BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 19-05552

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 708 Date/Time: 2/20 2230

Temperature: (A) 30 °C / (C) 3.3 °C Analyst Init: EMC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	AB	AB	A	AB						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	C	C	B	C						
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: 4A and -4B look different  
 Sample Numbering Completed By: [Signature] Date/Time: 2-20-18 2257 Rev 21 05/23/2016  
 A = Actual / C = Corrected

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500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:36  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1905552-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/20/2019 22:30
	<b>Project Number:</b> Aukeman Farms	<b>Sampling Date:</b> 02/20/2019 15:50
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> AUK-MW1	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905552-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/20/2019 22:30
	<b>Project Number:</b> Aukeman Farms	<b>Sampling Date:</b> 02/20/2019 16:15
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> AUK-MW2	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905552-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/20/2019 22:30
	<b>Project Number:</b> Aukeman Farms	<b>Sampling Date:</b> 02/20/2019 16:10
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> AUK-MW3	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905552-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/20/2019 22:30
	<b>Project Number:</b> Aukeman Farms	<b>Sampling Date:</b> 02/20/2019 12:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Dup-2	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/12/2019 13:36  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Aukeman Farms  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905552-01	Client Sample Name:	Aukeman Farms, AUK-MW1, 2/20/2019 3:50:00PM, Wesley Sherman-Shochley						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	170	mg/L	0.10	0.016	EPA-200.7	ND		1	
Dissolved Magnesium	18	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	150	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	0.72	mg/L	1.0	0.10	EPA-200.7	ND	J	1	
Bicarbonate Alkalinity as CaCO3	400	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	42	mg/L	2.5	0.34	EPA-300.0	ND	A07	3	
Nitrate as N	56	mg/L	0.50	0.095	EPA-300.0	ND	A07	3	
Sulfate	210	mg/L	5.0	0.70	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		4	
Total Kjeldahl Nitrogen	0.42	mg/L	0.20	0.036	EPA-351.2	ND		5	
Ammonia as N	0.12	mg/L	0.20	0.050	EPA-350.1	ND	J	6	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7	
Total Phosphate	0.94	mg/L	0.15	0.050	EPA-365.4	ND		8	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:30	02/28/19 17:11	JRG	PE-OP2	1	B038592
2	SM-2320B	02/22/19 12:00	02/22/19 15:49	MEV	MET-1	2	B031729
3	EPA-300.0	02/21/19 13:00	02/21/19 16:28	EMM	IC2	5	B038229
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	5	B038374
5	EPA-351.2	03/03/19 10:00	03/11/19 08:15	JMH	SC-1	1	B039138
6	EPA-350.1	03/08/19 11:30	03/12/19 07:56	JMH	SC-1	1	B039666
7	EPA-353.2	02/21/19 09:14	02/21/19 09:41	MC1	KONE-1	1	B038505
8	EPA-365.4	03/03/19 10:00	03/11/19 10:46	JMH	SC-1	1	B039139

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:36  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905552-02		Client Sample Name: Aukeman Farms, AUK-MW2, 2/20/2019 4:15:00PM, Wesley Sherman-Shochley						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	220	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	24	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	150	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.73	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	420	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	55	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	73	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	240	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.58	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.086	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	3.0	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:32	02/28/19 17:14	JRG	PE-OP2	1	B038592
2	SM-2320B	02/22/19 12:00	02/22/19 16:01	MEV	MET-1	2	B031729
3	EPA-300.0	02/21/19 13:00	02/21/19 16:48	EMM	IC2	5	B038229
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	5	B038374
5	EPA-351.2	03/03/19 10:00	03/11/19 08:19	JMH	SC-1	1	B039138
6	EPA-350.1	03/08/19 11:30	03/12/19 08:02	JMH	SC-1	1	B039666
7	EPA-353.2	02/21/19 09:14	02/21/19 09:41	MC1	KONE-1	1	B038505
8	EPA-365.4	03/03/19 10:00	03/11/19 10:48	JMH	SC-1	1	B039139

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Woodland, CA 95695

**Reported:** 03/12/2019 13:36  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905552-03	<b>Client Sample Name:</b> Aukeman Farms, AUK-MW3, 2/20/2019 4:10:00PM, Wesley Sherman-Shochley
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	19	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	250	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.69	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	580	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	43	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	53	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	140	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.36	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.062	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.41	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:32	02/28/19 17:17	JRG	PE-OP2	1	B038592
2	SM-2320B	02/22/19 12:00	02/22/19 16:06	MEV	MET-1	2	B031729
3	EPA-300.0	02/21/19 13:00	02/21/19 17:09	EMM	IC2	5	B038229
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	5	B038374
5	EPA-351.2	03/03/19 10:00	03/11/19 08:20	JMH	SC-1	1	B039138
6	EPA-350.1	03/08/19 11:30	03/12/19 08:04	JMH	SC-1	1	B039666
7	EPA-353.2	02/21/19 09:14	02/21/19 09:41	MC1	KONE-1	1	B038505
8	EPA-365.4	03/03/19 10:00	03/11/19 10:49	JMH	SC-1	1	B039139

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**Reported:** 03/12/2019 13:36  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905552-04	<b>Client Sample Name:</b> Aukeman Farms, Dup-2, 2/20/2019 12:00:00PM, Wesley Sherman-Shochley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	230	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	24	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	150	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.75	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	430	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	55	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	73	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	240	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.68	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.073	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	3.5	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:32	02/28/19 17:19	JRG	PE-OP2	1	B038592
2	SM-2320B	02/22/19 12:00	02/22/19 16:12	MEV	MET-1	2	B031729
3	EPA-300.0	02/21/19 13:00	02/21/19 18:11	KEB	IC2	5	B038229
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	5	B038374
5	EPA-351.2	03/03/19 10:00	03/11/19 08:22	JMH	SC-1	1	B039138
6	EPA-350.1	03/08/19 11:30	03/12/19 08:05	JMH	SC-1	1	B039666
7	EPA-353.2	02/21/19 09:14	02/21/19 09:41	MC1	KONE-1	1	B038505
8	EPA-365.4	03/03/19 10:00	03/11/19 10:51	JMH	SC-1	1	B039139

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Woodland, CA 95695

**Reported:** 03/12/2019 13:36  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031729</b>						
Bicarbonate Alkalinity as CaCO3	B031729-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031729-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031729-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038229</b>						
Chloride	B038229-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038229-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038229-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038374</b>						
Total Dissolved Solids @ 180 C	B038374-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038505</b>						
Nitrite as N	B038505-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038592</b>						
Dissolved Calcium	B038592-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038592-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038592-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038592-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039138</b>						
Total Kjeldahl Nitrogen	B039138-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039139</b>						
Total Phosphate	B039139-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039666</b>						
Ammonia as N	B039666-BLK1	ND	mg/L	0.20	0.050	

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Woodland, CA 95695

**Reported:** 03/12/2019 13:36  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038229</b>										
Chloride	B038229-BS1	LCS	53.315	50.000	mg/L	107		90 - 110		
Nitrate as N	B038229-BS1	LCS	5.1860	5.0000	mg/L	104		90 - 110		
Sulfate	B038229-BS1	LCS	105.10	100.00	mg/L	105		90 - 110		
<b>QC Batch ID: B038374</b>										
Total Dissolved Solids @ 180 C	B038374-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B038505</b>										
Nitrite as N	B038505-BS1	LCS	0.51182	0.50000	mg/L	102		90 - 110		
<b>QC Batch ID: B038592</b>										
Dissolved Calcium	B038592-BS1	LCS	9.7714	10.000	mg/L	97.7		85 - 115		
Dissolved Magnesium	B038592-BS1	LCS	9.3331	10.000	mg/L	93.3		85 - 115		
Dissolved Sodium	B038592-BS1	LCS	8.8367	10.000	mg/L	88.4		85 - 115		
Dissolved Potassium	B038592-BS1	LCS	9.1714	10.000	mg/L	91.7		85 - 115		
<b>QC Batch ID: B039138</b>										
Total Kjeldahl Nitrogen	B039138-BS1	LCS	2.0136	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B039139</b>										
Total Phosphate	B039139-BS1	LCS	3.1202	3.0660	mg/L	102		85 - 115		
<b>QC Batch ID: B039666</b>										
Ammonia as N	B039666-BS1	LCS	0.97340	1.0000	mg/L	97.3		90 - 110		

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Woodland, CA 95695

Reported: 03/12/2019 13:36  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Aukeman Farms  
Project Manager: Till Angermann

### Water Analysis (General Chemistry) Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B031729</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1905552-01	397.98	392.81		mg/L	1.3		10	
Carbonate Alkalinity as CaCO3	DUP	1905552-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1905552-01	ND	ND		mg/L			10	
<b>QC Batch ID: B038229</b>		Used client sample: N								
Chloride	DUP	1905554-01	32.790	32.590		mg/L	0.6		10	
	MS	1905554-01	32.790	314.98	252.53	mg/L		112		80 - 120
	MSD	1905554-01	32.790	314.73	252.53	mg/L	0.1	112	10	80 - 120
Nitrate as N	DUP	1905554-01	41.850	42.015		mg/L	0.4		10	
	MS	1905554-01	41.850	68.995	25.253	mg/L		107		80 - 120
	MSD	1905554-01	41.850	69.338	25.253	mg/L	0.5	109	10	80 - 120
Sulfate	DUP	1905554-01	90.940	89.485		mg/L	1.6		10	
	MS	1905554-01	90.940	648.27	505.05	mg/L		110		80 - 120
	MSD	1905554-01	90.940	649.13	505.05	mg/L	0.1	111	10	80 - 120
<b>QC Batch ID: B038374</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1905498-02	630.00	640.00		mg/L	1.6		10	
<b>QC Batch ID: B038505</b>		Used client sample: N								
Nitrite as N	DUP	1905531-01	ND	ND		mg/L			10	
	MS	1905531-01	ND	0.54237	0.52632	mg/L		103		90 - 110
	MSD	1905531-01	ND	0.54957	0.52632	mg/L	1.3	104	10	90 - 110
<b>QC Batch ID: B038592</b>		Used client sample: N								
Dissolved Calcium	DUP	1905550-01	91.946	92.244		mg/L	0.3		20	
	MS	1905550-01	91.946	103.07	10.204	mg/L		109		85 - 115
	MSD	1905550-01	91.946	103.37	10.204	mg/L	0.3	112	20	85 - 115
Dissolved Magnesium	DUP	1905550-01	24.995	25.086		mg/L	0.4		20	
	MS	1905550-01	24.995	34.844	10.204	mg/L		96.5		85 - 115
	MSD	1905550-01	24.995	35.197	10.204	mg/L	1.0	100	20	85 - 115
Dissolved Sodium	DUP	1905550-01	58.104	58.169		mg/L	0.1		20	
	MS	1905550-01	58.104	69.564	10.204	mg/L		112		85 - 115
	MSD	1905550-01	58.104	69.310	10.204	mg/L	0.4	110	20	85 - 115
Dissolved Potassium	DUP	1905550-01	3.0792	3.0358		mg/L	1.4		20	
	MS	1905550-01	3.0792	12.912	10.204	mg/L		96.4		85 - 115
	MSD	1905550-01	3.0792	13.122	10.204	mg/L	1.6	98.4	20	85 - 115
<b>QC Batch ID: B039138</b>		Used client sample: Y - Description: AUK-MW1, 02/20/2019 15:50								
Total Kjeldahl Nitrogen	DUP	1905552-01	0.41640	0.39260		mg/L	5.9		20	
	MS	1905552-01	0.41640	1.6717	2.0000	mg/L		62.8		90 - 110 Q03
	MSD	1905552-01	0.41640	1.3754	2.0000	mg/L	19.4	48.0	20	90 - 110 Q03

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:36  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039139</b>		Used client sample: Y - Description: AUK-MW1, 02/20/2019 15:50								
Total Phosphate	DUP	1905552-01	0.94286	0.96831		mg/L	2.7		20	
	MS	1905552-01	0.94286	4.0685	3.0660	mg/L		102		80 - 120
	MSD	1905552-01	0.94286	4.0796	3.0660	mg/L	0.3	102	20	80 - 120
<b>QC Batch ID: B039666</b>		Used client sample: Y - Description: AUK-MW1, 02/20/2019 15:50								
Ammonia as N	DUP	1905552-01	0.12460	0.11200		mg/L	10.7		10	J,A02
	MS	1905552-01	0.12460	1.1937	1.1111	mg/L		96.2		90 - 110
	MSD	1905552-01	0.12460	1.2296	1.1111	mg/L	3.0	99.4	10	90 - 110

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Woodland, CA 95695

**Reported:** 03/12/2019 13:36  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 03/04/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Dairyland Farms

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1904942

Invoice ID: B332565

Enclosed are the results of analyses for samples received by the laboratory on 2/14/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1904942

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		Chain of Custody						
19-04942		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911						
Report to:								
Expanded Constituent Suite								
Project: Dairy Representative Monitoring Program								
Site: Dairyland Farms								
Samplers Name:								
Global ID - WDR100039173								
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qt Pe Unpreserved	From Filtered Sample:	From Filtered Sample:	From Unfiltered Sample:
1	<del>DLF-MW1</del>				X	Ammonia-N, NO3-N, NO2-N	Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
2	<del>DLF-MW2</del>				X			
3	<del>DLF-MW3</del>				X			
4	<del>DLF-MW4A, DLF-MW4B, DLF-MW4C</del>				X			
5	<del>DLF-MW5A, DLF-MW5B, DLF-MW5C</del>				X			
6	<del>DLF-MW6A, DLF-MW6B, DLF-MW6C, DLF-MW6D</del>	02/14/2019	12:35	CG	X			
7	Field Duplicate				X			
8					X			
9					X			
10					X			

  

CHK BY: [Signature]	DISTRIBUTION: [Signature]	SHOPE HOLDING TIME: [Signature]
DO	CL	ECOL
MRAS	COT	

  

Comments:

- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Lohdorff and Scalmanini Consulting Engineers via email: llavegmino@lscce.com, rbryson@lscce.com, pdhallwell@lscce.com, jlovelis@lscce.com
- Send invoices to: Jeanette Lovelis (jlovelis@lscce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 1904942

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/14 2200

Temperature: (A) 5.4 °C / (C) 5.7 °C Analyst Init: EML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	AB									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr*										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	C									
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODDR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/018/0080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GSB Date/Time: 2/14 2221

A = Actual / C = Corrected

Rev 21 05/23/2016  
 (S:\WPDoc\IWork\Pericoll\LAB\_DOC\FORMS\SAMECCIV 26)



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 19:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1904942-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/14/2019 22:00
	<b>Project Number:</b>	Dairyland Farms	<b>Sampling Date:</b>	02/14/2019 12:35
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DLF-MW6C	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 19:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1904942-01		Client Sample Name: Dairyland Farms, DLF-MW6C, 2/14/2019 12:35:00PM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	170	mg/L	0.10	0.016	EPA-200.7	0.042		1
Dissolved Magnesium	20	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	74	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.2	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	310	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	34	mg/L	5.0	0.77	EPA-300.0	ND	A07	3
Nitrate as N	59	mg/L	1.0	0.21	EPA-300.0	ND	A07	3
Sulfate	88	mg/L	10	1.3	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	800	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.28	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.60	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/15/19 13:35	02/25/19 20:11	JRG	PE-OP2	1	B038575
2	SM-2320B	02/20/19 07:30	02/20/19 08:40	MEV	MET-1	2	B031708
3	EPA-300.0	02/14/19 15:00	02/15/19 04:50	EMM	IC2	10	B037790
4	SM-2540C	02/19/19 16:00	02/19/19 16:00	CAD	MANUAL	5	B038017
5	EPA-351.2	02/26/19 21:30	02/27/19 13:40	JMH	SC-1	1	B038739
6	EPA-350.1	03/01/19 12:43	03/01/19 15:07	JMH	SC-1	1	B039015
7	EPA-353.2	02/15/19 08:10	02/15/19 08:10	MC1	KONE-1	1	B037980
8	EPA-365.4	02/26/19 21:30	02/27/19 11:22	JMH	SC-1	1	B038740

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 19:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031708</b>						
Bicarbonate Alkalinity as CaCO3	B031708-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031708-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031708-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B037790</b>						
Chloride	B037790-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B037790-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B037790-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B037980</b>						
Nitrite as N	B037980-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038017</b>						
Total Dissolved Solids @ 180 C	B038017-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038575</b>						
Dissolved Calcium	B038575-BLK2	0.041742	mg/L	0.10	0.016	J
Dissolved Magnesium	B038575-BLK2	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038575-BLK2	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038575-BLK3	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B038739</b>						
Total Kjeldahl Nitrogen	B038739-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B038740</b>						
Total Phosphate	B038740-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039015</b>						
Ammonia as N	B039015-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 19:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B037790</b>										
Chloride	B037790-BS1	LCS	51.038	50.000	mg/L	102		90 - 110		
Nitrate as N	B037790-BS1	LCS	5.0090	5.0000	mg/L	100		90 - 110		
Sulfate	B037790-BS1	LCS	101.38	100.00	mg/L	101		90 - 110		
<b>QC Batch ID: B037980</b>										
Nitrite as N	B037980-BS1	LCS	0.49742	0.50000	mg/L	99.5		90 - 110		
<b>QC Batch ID: B038017</b>										
Total Dissolved Solids @ 180 C	B038017-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B038575</b>										
Dissolved Calcium	B038575-BS2	LCS	10.408	10.000	mg/L	104		85 - 115		
Dissolved Magnesium	B038575-BS2	LCS	10.311	10.000	mg/L	103		85 - 115		
Dissolved Sodium	B038575-BS2	LCS	9.4728	10.000	mg/L	94.7		85 - 115		
Dissolved Potassium	B038575-BS3	LCS	9.0890	10.000	mg/L	90.9		85 - 115		
<b>QC Batch ID: B038739</b>										
Total Kjeldahl Nitrogen	B038739-BS1	LCS	1.9269	2.0000	mg/L	96.3		90 - 110		
<b>QC Batch ID: B038740</b>										
Total Phosphate	B038740-BS1	LCS	3.0886	3.0660	mg/L	101		85 - 115		
<b>QC Batch ID: B039015</b>										
Ammonia as N	B039015-BS1	LCS	0.94350	1.0000	mg/L	94.4		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/04/2019 19:13  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Dairyland Farms  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B031708</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1904942-01	310.35	309.74		mg/L	0.2		10	
Carbonate Alkalinity as CaCO3	DUP	1904942-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1904942-01	ND	ND		mg/L			10	
<b>QC Batch ID: B037790</b>		Used client sample: N								
Chloride	DUP	1904944-01	39.016	39.142		mg/L	0.3		10	
	MS	1904944-01	39.016	95.749	50.505	mg/L		112		80 - 120
	MSD	1904944-01	39.016	95.514	50.505	mg/L	0.2	112	10	80 - 120
Nitrate as N	DUP	1904944-01	9.9340	10.049		mg/L	1.2		10	
	MS	1904944-01	9.9340	15.176	5.0505	mg/L		104		80 - 120
	MSD	1904944-01	9.9340	15.115	5.0505	mg/L	0.4	103	10	80 - 120
Sulfate	DUP	1904944-01	77.623	77.982		mg/L	0.5		10	
	MS	1904944-01	77.623	190.31	101.01	mg/L		112		80 - 120
	MSD	1904944-01	77.623	190.09	101.01	mg/L	0.1	111	10	80 - 120
<b>QC Batch ID: B037980</b>		Used client sample: Y - Description: DLF-MW6C, 02/14/2019 12:35								
Nitrite as N	DUP	1904942-01	ND	ND		mg/L			10	
	MS	1904942-01	ND	0.53623	0.52632	mg/L		102		90 - 110
	MSD	1904942-01	ND	0.53539	0.52632	mg/L	0.2	102	10	90 - 110
<b>QC Batch ID: B038017</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1904905-01	30200	30600		mg/L	1.3		10	
<b>QC Batch ID: B038575</b>		Used client sample: N								
Dissolved Calcium	DUP	1904906-01	15.726	15.637		mg/L	0.6		20	
	MS	1904906-01	15.726	26.156	10.204	mg/L		102		85 - 115
	MSD	1904906-01	15.726	25.981	10.204	mg/L	0.7	100	20	85 - 115
Dissolved Magnesium	DUP	1904906-01	3.3220	3.2391		mg/L	2.5		20	
	MS	1904906-01	3.3220	13.861	10.204	mg/L		103		85 - 115
	MSD	1904906-01	3.3220	13.359	10.204	mg/L	3.7	98.4	20	85 - 115
Dissolved Sodium	DUP	1904906-01	9.9116	9.8332		mg/L	0.8		20	
	MS	1904906-01	9.9116	19.959	10.204	mg/L		98.5		85 - 115
	MSD	1904906-01	9.9116	19.735	10.204	mg/L	1.1	96.3	20	85 - 115
Dissolved Potassium	DUP	1904906-01	1.9269	1.9398		mg/L	0.7		20	
	MS	1904906-01	1.9269	11.614	10.204	mg/L		94.9		85 - 115
	MSD	1904906-01	1.9269	11.656	10.204	mg/L	0.4	95.3	20	85 - 115
<b>QC Batch ID: B038739</b>		Used client sample: Y - Description: DLF-MW6C, 02/14/2019 12:35								
Total Kjeldahl Nitrogen	DUP	1904942-01	0.27770	0.30290		mg/L	8.7		20	
	MS	1904942-01	0.27770	2.1690	2.0000	mg/L		94.6		90 - 110
	MSD	1904942-01	0.27770	2.1870	2.0000	mg/L	0.8	95.5	20	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 19:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038740</b>		Used client sample: Y - Description: DLF-MW6C, 02/14/2019 12:35								
Total Phosphate	DUP	1904942-01	0.60220	0.59607		mg/L	1.0		20	
	MS	1904942-01	0.60220	3.6491	3.0660	mg/L		99.4		80 - 120
	MSD	1904942-01	0.60220	3.6460	3.0660	mg/L	0.1	99.3	20	80 - 120
<b>QC Batch ID: B039015</b>		Used client sample: N								
Ammonia as N	DUP	1904817-01	0.099600	0.073300		mg/L	30.4		10	J,A02
	MS	1904817-01	0.099600	1.2431	1.1111	mg/L		103		90 - 110
	MSD	1904817-01	0.099600	1.2786	1.1111	mg/L	2.8	106	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 19:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.

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Date of Report: 04/22/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Giacomazzi Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1909793  
Invoice ID: B337321

Enclosed are the results of analyses for samples received by the laboratory on 3/28/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000876460

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1909793

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



19-09793

BC Laboratories, Inc.

4100 Atlas CL  
Bakersfield, CA 93308  
(661) 327-4911

Chain of Custody

Report to:

Expanded Constituent Suite  
Project: Dairy Representative Monitoring Program  
Site: Glacomaazi Dairy  
Samplers Name: Wesley Sherman - Security  
Global ID - WDR100037884

Analysis Requested

From Filtered Sample:  
Na, K, Mg, Ca, Cl,  
SO4 (as SO4),  
Total Dissolved Solids

From Filtered Sample:  
Ammonia-N, NO3-N,  
NO2-N

From Unfiltered Sample:  
Total Kjeldahl Nitrogen,  
Total Phosphate (as PO4),  
Alkalinity (HCO3, CO3 & OH) as  
CaCO3

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	OT Pe Unpreserved	From Filtered Sample: Ammonia-N, NO3-N, NO2-N	From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
1	ZZ1-MW1A, ZZ1-MW4B <del>ZZ1-MW1G, ZZ1-MW4F</del>				x	x	x	x
2	ZZ1-MW2A, ZZ1-MW2B ZZ1-MW2C, ZZ1-MW2D	3/23/19	12:15	W6	x	x	x	x
3	ZZ1-MW3A, ZZ1-MW3AA <del>ZZ1-MW3B</del>		13:15	W6	x	x	x	x
4	ZZ1-MW5A, ZZ1-MW5B ZZ1-MW5C, ZZ1-MW5D	3/23/19	13:15	W6	x	x	x	x
5	ZZ1-MW6A, ZZ1-MW6B <del>ZZ1-MW6C, ZZ1-MW6D</del>				x	x	x	x
6	ZZ1-MW7A, ZZ1-MW7B ZZ1-MW7C, ZZ1-MW7D	3/23/19	14:30	W6	x	x	x	x
7	ZZ1-MW9A, ZZ1-MW9B <del>ZZ1-MW9C, ZZ1-MW9D</del>				x	x	x	x
8	-4 -Field Duplicate Dup-A	3/23/19	12:00	W6	x	x	x	x
9								
10								
11								

GHK BY: MANA DISTRIBUTION: MANA

Relinquished by: (Signature) [Signature] Date & Time: 3/28/19 20:30

Relinquished by: (Signature) [Signature] Date & Time: 3/28/19 22:30

Relinquished by: (Signature) [Signature] Date & Time: 3/28/19 22:30

SHOPS + GLBING TIME: GP 66

DU Received by: [Signature] Date & Time: 3/28/19 20:30

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luthdorff and Scalmani Consulting Engineers via email: llavagnino@lisce.com, royson@lisce.com, pdhawal@lisce.com, jlovelis@lisce.com  
 4) Send invoices to Jeanette Lovelis (jlovelis@lisce.com).

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-09793

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO

Emissivity: 0-C18 Container: PE Thermometer ID: 208 Date/Time: 3/28/2018

Temperature: (A) 2.6 °C / (C) 2.5 °C Analyst Init: FWC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE	B	B	B	B						
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/6080										
QT EPA 515.1/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: Gof Date/Time: 3/28 2018

- = Actual / C = Corrected

Rev 21 05/23/2016



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/22/2019 14:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1909793-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 03/28/2019 22:30
	<b>Project Number:</b> Giacomazzi Dairy	<b>Sampling Date:</b> 03/28/2019 12:15
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ZZI-MW2D	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1909793-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 03/28/2019 22:30
	<b>Project Number:</b> Giacomazzi Dairy	<b>Sampling Date:</b> 03/28/2019 13:15
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ZZI-MW5C	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1909793-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 03/28/2019 22:30
	<b>Project Number:</b> Giacomazzi Dairy	<b>Sampling Date:</b> 03/28/2019 14:30
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ZZI-MW7C	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1909793-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 03/28/2019 22:30
	<b>Project Number:</b> Giacomazzi Dairy	<b>Sampling Date:</b> 03/28/2019 12:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> DUP-4	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/22/2019 14:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909793-01	<b>Client Sample Name:</b> Giacomazzi Dairy, ZZI-MW2D, 3/28/2019 12:15:00PM, Wesley Sherman-Shochley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	8.2	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	1.3	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	61	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.24	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	130	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	11	mg/L	0.50	0.15	EPA-300.0	ND		3
Nitrate as N	1.8	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	14	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	240	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.20	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.11	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.24	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/08/19 13:09	04/11/19 14:16	JRG	PE-OP2	1	B042961
2	SM-2320B	04/02/19 07:00	04/02/19 09:26	MEV	MET-1	1	B041696
3	EPA-300.0	03/29/19 08:00	03/29/19 10:59	SAV	IC2	1	B041729
4	SM-2540C	04/01/19 13:30	04/01/19 13:30	CAD	MANUAL	2	B041906
5	EPA-351.2	04/11/19 08:00	04/16/19 13:41	JMH	SC-1	1	B043303
6	EPA-350.1	04/10/19 06:25	04/10/19 09:50	JMH	SC-1	1	B043178
7	EPA-353.2	03/29/19 10:17	03/29/19 10:17	MC1	KONE-1	1	B041893
8	EPA-365.4	04/11/19 08:00	04/16/19 17:57	JMH	SC-1	1	B043304

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500 First Street  
Woodland, CA 95695

**Reported:** 04/22/2019 14:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909793-02	<b>Client Sample Name:</b> Giacomazzi Dairy, ZZI-MW5C, 3/28/2019 1:15:00PM, Wesley Sherman-Shochley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	45	mg/L	0.10	0.016	EPA-200.7	0.016		1
Dissolved Magnesium	11	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	280	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.1	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	470	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	96	mg/L	1.0	0.30	EPA-300.0	ND	A07	3
Nitrate as N	36	mg/L	0.20	0.084	EPA-300.0	ND	A07	3
Sulfate	85	mg/L	2.0	0.40	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	990	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.98	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.16	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/17/19 09:00	04/17/19 16:28	JRG	PE-OP2	1	B039633
2	SM-2320B	04/02/19 07:00	04/02/19 08:28	MEV	MET-1	2	B041696
3	EPA-300.0	03/29/19 08:00	03/29/19 15:27	KEB	IC2	2	B041729
4	SM-2540C	04/01/19 13:30	04/01/19 13:30	CAD	MANUAL	5	B041906
5	EPA-351.2	04/11/19 08:00	04/16/19 13:44	JMH	SC-1	1	B043303
6	EPA-350.1	04/10/19 06:25	04/10/19 09:51	JMH	SC-1	1	B043178
7	EPA-353.2	03/29/19 10:17	03/29/19 10:17	MC1	KONE-1	1	B041893
8	EPA-365.4	04/11/19 08:00	04/16/19 17:18	JMH	SC-1	1	B043304

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Woodland, CA 95695

**Reported:** 04/22/2019 14:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909793-03	<b>Client Sample Name:</b> Giacomazzi Dairy, ZZI-MW7C, 3/28/2019 2:30:00PM, Wesley Sherman-Shochley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	32	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	5.7	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	270	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.44	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	510	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	95	mg/L	0.50	0.15	EPA-300.0	ND		3
Nitrate as N	5.7	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	81	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	900	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.90	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.051	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.5	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/08/19 13:09	04/11/19 14:21	JRG	PE-OP2	1	B042961
2	SM-2320B	04/02/19 07:00	04/02/19 09:34	MEV	MET-1	2	B041696
3	EPA-300.0	03/29/19 08:00	03/29/19 15:06	KEB	IC2	1	B041729
4	SM-2540C	04/01/19 13:30	04/01/19 13:30	CAD	MANUAL	5	B041906
5	EPA-351.2	04/11/19 08:00	04/16/19 13:46	JMH	SC-1	1	B043303
6	EPA-350.1	04/10/19 06:26	04/10/19 09:53	JMH	SC-1	1	B043179
7	EPA-353.2	03/29/19 10:17	03/29/19 10:17	MC1	KONE-1	1	B041893
8	EPA-365.4	04/11/19 08:00	04/16/19 17:18	JMH	SC-1	1	B043304

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Woodland, CA 95695

Reported: 04/22/2019 14:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Giacomazzi Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1909793-04		Client Sample Name: Giacomazzi Dairy, DUP-4, 3/28/2019 12:00:00PM, Wesley Sherman-Shochley						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	8.0	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	1.3	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	63	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.21	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	130	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	11	mg/L	0.50	0.15	EPA-300.0	ND		3
Nitrate as N	2.1	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	13	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	240	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.18	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	0.093	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.026	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.39	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/08/19 13:09	04/11/19 14:24	JRG	PE-OP2	1	B042961
2	SM-2320B	04/02/19 07:00	04/02/19 09:39	MEV	MET-1	1	B041696
3	EPA-300.0	03/29/19 08:00	03/29/19 13:44	SAV	IC2	1	B041729
4	SM-2540C	04/01/19 13:30	04/01/19 13:30	CAD	MANUAL	2	B041906
5	EPA-351.2	04/11/19 08:00	04/16/19 13:46	JMH	SC-1	1	B043303
6	EPA-350.1	04/10/19 06:26	04/10/19 09:57	JMH	SC-1	1	B043179
7	EPA-353.2	03/29/19 10:17	03/29/19 10:17	MC1	KONE-1	1	B041893
8	EPA-365.4	04/11/19 08:00	04/16/19 17:19	JMH	SC-1	1	B043304

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**Reported:** 04/22/2019 14:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B039633</b>						
Dissolved Calcium	B039633-BLK1	0.016330	mg/L	0.10	0.016	J
Dissolved Magnesium	B039633-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039633-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B039633-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B041696</b>						
Bicarbonate Alkalinity as CaCO3	B041696-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B041696-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B041696-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B041729</b>						
Chloride	B041729-BLK1	ND	mg/L	0.50	0.15	
Nitrate as N	B041729-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B041729-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B041893</b>						
Nitrite as N	B041893-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B041906</b>						
Total Dissolved Solids @ 180 C	B041906-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B042961</b>						
Dissolved Calcium	B042961-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B042961-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B042961-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B042961-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B043178</b>						
Ammonia as N	B043178-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B043179</b>						
Ammonia as N	B043179-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B043303</b>						
Total Kjeldahl Nitrogen	B043303-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B043304</b>						
Total Phosphate	B043304-BLK1	ND	mg/L	0.15	0.050	

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500 First Street  
Woodland, CA 95695

**Reported:** 04/22/2019 14:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039633</b>										
Dissolved Calcium	B039633-BS1	LCS	10.124	10.000	mg/L	101		85 - 115		
Dissolved Magnesium	B039633-BS1	LCS	10.047	10.000	mg/L	100		85 - 115		
Dissolved Sodium	B039633-BS1	LCS	9.2689	10.000	mg/L	92.7		85 - 115		
Dissolved Potassium	B039633-BS1	LCS	9.2607	10.000	mg/L	92.6		85 - 115		
<b>QC Batch ID: B041729</b>										
Chloride	B041729-BS1	LCS	51.122	50.000	mg/L	102		90 - 110		
Nitrate as N	B041729-BS1	LCS	5.0220	5.0000	mg/L	100		90 - 110		
Sulfate	B041729-BS1	LCS	102.24	100.00	mg/L	102		90 - 110		
<b>QC Batch ID: B041893</b>										
Nitrite as N	B041893-BS1	LCS	0.48136	0.50000	mg/L	96.3		90 - 110		
<b>QC Batch ID: B041906</b>										
Total Dissolved Solids @ 180 C	B041906-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B042961</b>										
Dissolved Calcium	B042961-BS1	LCS	9.8014	10.000	mg/L	98.0		85 - 115		
Dissolved Magnesium	B042961-BS1	LCS	9.7815	10.000	mg/L	97.8		85 - 115		
Dissolved Sodium	B042961-BS1	LCS	8.6026	10.000	mg/L	86.0		85 - 115		
Dissolved Potassium	B042961-BS1	LCS	8.6190	10.000	mg/L	86.2		85 - 115		
<b>QC Batch ID: B043178</b>										
Ammonia as N	B043178-BS1	LCS	1.0336	1.0000	mg/L	103		90 - 110		
<b>QC Batch ID: B043179</b>										
Ammonia as N	B043179-BS1	LCS	1.0015	1.0000	mg/L	100		90 - 110		
<b>QC Batch ID: B043303</b>										
Total Kjeldahl Nitrogen	B043303-BS1	LCS	1.9157	2.0000	mg/L	95.8		90 - 110		
<b>QC Batch ID: B043304</b>										
Total Phosphate	B043304-BS1	LCS	3.0423	3.0660	mg/L	99.2		85 - 115		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 04/22/2019 14:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Giacomazzi Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B039633</b>		Used client sample: N								
Dissolved Calcium	DUP	905244-01RE'	23.982	22.715		mg/L	5.4		20	
	MS	905244-01RE'	23.982	35.037	10.204	mg/L		108		85 - 115
	MSD	905244-01RE'	23.982	34.847	10.204	mg/L	0.5	106	20	85 - 115
Dissolved Magnesium	DUP	905244-01RE'	13.886	13.511		mg/L	2.7		20	
	MS	905244-01RE'	13.886	24.478	10.204	mg/L		104		85 - 115
	MSD	905244-01RE'	13.886	25.091	10.204	mg/L	2.5	110	20	85 - 115
Dissolved Sodium	DUP	1905244-01RE1	52.196	49.751		mg/L	4.8		20	
	MS	1905244-01RE1	52.196	64.070	10.204	mg/L		116		85 - 115 A03
	MSD	1905244-01RE1	52.196	63.256	10.204	mg/L	1.3	108	20	85 - 115
Dissolved Potassium	DUP	905244-01RE'	3.5659	3.4284		mg/L	3.9		20	
	MS	905244-01RE'	3.5659	13.952	10.204	mg/L		102		85 - 115
	MSD	905244-01RE'	3.5659	13.663	10.204	mg/L	2.1	99.0	20	85 - 115
<b>QC Batch ID: B041696</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1909793-02	474.35	474.96		mg/L	0.1		10	
Carbonate Alkalinity as CaCO3	DUP	1909793-02	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1909793-02	ND	ND		mg/L			10	
<b>QC Batch ID: B041729</b>		Used client sample: Y - Description: ZZI-MW2D, 03/28/2019 12:15								
Chloride	DUP	1909793-01	11.461	11.383		mg/L	0.7		10	
	MS	1909793-01	11.461	66.277	50.505	mg/L		109		80 - 120
	MSD	1909793-01	11.461	66.209	50.505	mg/L	0.1	108	10	80 - 120
Nitrate as N	DUP	1909793-01	1.8040	1.8070		mg/L	0.2		10	
	MS	1909793-01	1.8040	7.0434	5.0505	mg/L		104		80 - 120
	MSD	1909793-01	1.8040	7.0838	5.0505	mg/L	0.6	105	10	80 - 120
Sulfate	DUP	1909793-01	13.621	13.487		mg/L	1.0		10	
	MS	1909793-01	13.621	119.18	101.01	mg/L		105		80 - 120
	MSD	1909793-01	13.621	119.11	101.01	mg/L	0.1	104	10	80 - 120
<b>QC Batch ID: B041893</b>		Used client sample: Y - Description: ZZI-MW5C, 03/28/2019 13:15								
Nitrite as N	DUP	1909793-02	ND	ND		mg/L			10	
	MS	1909793-02	ND	0.54011	0.52632	mg/L		103		90 - 110
	MSD	1909793-02	ND	0.54509	0.52632	mg/L	0.9	104	10	90 - 110
<b>QC Batch ID: B041906</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1909771-01	26900	27000		mg/L	0.4		10	
<b>QC Batch ID: B042961</b>		Used client sample: N								
Dissolved Calcium	DUP	1910472-04	ND	0.031369		mg/L			20	J
	MS	1910472-04	ND	9.9736	10.204	mg/L		97.7		85 - 115
	MSD	1910472-04	ND	10.019	10.204	mg/L	0.5	98.2	20	85 - 115

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/22/2019 14:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B042961</b>		Used client sample: N								
Dissolved Magnesium	DUP	1910472-04	ND	ND		mg/L			20	
	MS	1910472-04	ND	9.9943	10.204	mg/L		97.9		85 - 115
	MSD	1910472-04	ND	10.057	10.204	mg/L	0.6	98.6	20	85 - 115
Dissolved Sodium	DUP	1910472-04	0.11246	0.11200		mg/L	0.4		20	J
	MS	1910472-04	0.11246	8.9812	10.204	mg/L		86.9		85 - 115
	MSD	1910472-04	0.11246	8.9434	10.204	mg/L	0.4	86.5	20	85 - 115
Dissolved Potassium	DUP	1910472-04	ND	ND		mg/L			20	
	MS	1910472-04	ND	9.1114	10.204	mg/L		89.3		85 - 115
	MSD	1910472-04	ND	9.1377	10.204	mg/L	0.3	89.5	20	85 - 115
<b>QC Batch ID: B043178</b>		Used client sample: N								
Ammonia as N	DUP	1909758-01	ND	ND		mg/L			10	
	MS	1909758-01	ND	1.1326	1.1111	mg/L		102		90 - 110
	MSD	1909758-01	ND	1.1217	1.1111	mg/L	1.0	101	10	90 - 110
<b>QC Batch ID: B043179</b>		Used client sample: Y - Description: ZZI-MW7C, 03/28/2019 14:30								
Ammonia as N	DUP	1909793-03	0.051000	ND		mg/L			10	
	MS	1909793-03	0.051000	1.1791	1.1111	mg/L		102		90 - 110
	MSD	1909793-03	0.051000	1.1454	1.1111	mg/L	2.9	98.5	10	90 - 110
<b>QC Batch ID: B043303</b>		Used client sample: Y - Description: ZZI-MW2D, 03/28/2019 12:15								
Total Kjeldahl Nitrogen	DUP	1909793-01	0.19920	0.12920		mg/L	42.6		20	J,A02
	MS	1909793-01	0.19920	2.1203	2.0000	mg/L		96.1		90 - 110
	MSD	1909793-01	0.19920	2.1884	2.0000	mg/L	3.2	99.5	20	90 - 110
<b>QC Batch ID: B043304</b>		Used client sample: Y - Description: ZZI-MW2D, 03/28/2019 12:15								
Total Phosphate	DUP	1909793-01	0.24131	0.25112		mg/L	4.0		20	
	MS	1909793-01	0.24131	3.2278	3.0660	mg/L		97.4		80 - 120
	MSD	1909793-01	0.24131	3.3146	3.0660	mg/L	2.7	100	20	80 - 120

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/22/2019 14:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.







Date of Report: 05/10/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Giacomazzi Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1912451

Invoice ID: B339529

Enclosed are the results of analyses for samples received by the laboratory on 4/18/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000884905

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1912451

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		19-12451		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4811		Chain of Custody	
Report to:				Analysis Requested			
Name:	Luhdorff and Scalmanini	Expanded Constituent Suite		From Filtered Sample:	Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Filtered Sample:	Ammonia-N, NO3-N, NO2-N
Address:	500 First Street	Project:	Dairy Representative Monitoring Program	From Unfiltered Sample:	Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3		
City:	Woodland	Site:	Glacomaazi Dairy				
State:	96680	Samplers Name:					
Attn:	Till Angermann	Global ID - WDR100037884					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	CK	Pe	Unpreserved
1	<del>ZZI-MW1A, ZZI-MW1B</del> <del>ZZI-MW1C, ZZI-MW1D</del>				x		x
2	<del>ZZI-MW2A, ZZI-MW2B</del> <del>ZZI-MW2C, ZZI-MW2D</del>				x		x
3	ZZI-MW3A, ZZI-MW3AA -1		12:55		x		x
4	<del>ZZI-MW5A, ZZI-MW5B</del> <del>ZZI-MW5C, ZZI-MW5D</del>		12:25		x		x
5	ZZI-MW6A, ZZI-MW6B -2		12:25		x		x
6	<del>ZZI-MW7A, ZZI-MW7B</del> <del>ZZI-MW7C, ZZI-MW7D</del>		13:15		x		x
7	ZZI-MW9A, ZZI-MW9B -Field Duplicate				x		x
8							
9							
10							
11							

CHK BY: DISTRIBUTION  
 [Signature] [Signature]  
 SUB-OUT: [ ] [ ]

Relinquished by: (Signature)	Received By: [Signature]	Date & Time
Relinquished by: (Signature)	Received By: [Signature]	4-18-19 0830
Relinquished by: (Signature)	Received By: [Signature]	Date & Time

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: lavagnino@isce.com, robyson@isce.com, pdhalwal@isce.com, jovelis@isce.com  
 4) Send invoices to Jeanette Lovelis (jovelis@isce.com).

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-12451

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) Other

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.95 Container: pe Thermometer ID: 274 Date/Time: 4-18-19 0830  
 Temperature: (A) 1.0 °C / (C) 1.1 °C Analyst Init: KJG

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B							
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_ Date/Time: 4/18/19 1015 Rev 21 05/23/2016  
 Sample Numbering Completed By: [Signature]  
 A = Actual / C = Corrected

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1912451-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/18/2019 08:30
	<b>Project Number:</b>	Giacomazzi	<b>Sampling Date:</b>	04/17/2019 12:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ZZI-MW3B	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1912451-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/18/2019 08:30
	<b>Project Number:</b>	Giacomazzi	<b>Sampling Date:</b>	04/17/2019 12:25
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ZZI-MW6D	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1912451-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/18/2019 08:30
	<b>Project Number:</b>	Giacomazzi	<b>Sampling Date:</b>	04/17/2019 13:15
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ZZI-MW9C	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1912451-01	<b>Client Sample Name:</b> Giacomazzi, ZZI-MW3B, 4/17/2019 12:55:00PM
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	33	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	5.2	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.23	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	260	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	38	mg/L	0.50	0.15	EPA-300.0	ND		3
Nitrate as N	13	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	37	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	520	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.30	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.030	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.070	mg/L	0.15	0.050	EPA-365.4	ND	J	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/19 09:00	05/06/19 12:22	JRG	PE-OP2	1	B044958
2	SM-2320B	04/19/19 10:00	04/19/19 14:55	MEV	MET-1	1	B042195
3	EPA-300.0	04/18/19 13:00	04/18/19 19:27	KEB	IC8	1	B044054
4	SM-2540C	04/19/19 15:45	04/19/19 15:45	NW1	MANUAL	3.333	B044082
5	EPA-351.2	05/01/19 21:30	05/02/19 09:23	JMH	SC-1	1	B045155
6	EPA-350.1	05/07/19 08:18	05/07/19 14:26	JMH	SC-1	1	B045533
7	EPA-353.2	04/18/19 09:22	04/18/19 11:59	MC1	KONE-1	1	B044231
8	EPA-365.4	05/01/19 21:30	05/03/19 10:06	JMH	SC-1	1	B045157

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1912451-02		Client Sample Name: Giacomazzi, ZZI-MW6D, 4/17/2019 12:25:00PM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	86	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	20	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	350	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.79	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	640	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	140	mg/L	1.0	0.30	EPA-300.0	ND	A07	3
Nitrate as N	40	mg/L	0.50	0.21	EPA-300.0	ND	A07	4
Sulfate	150	mg/L	2.0	0.40	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.85	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.086	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	ND	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/19 09:00	05/06/19 12:25	JRG	PE-OP2	1	B044958
2	SM-2320B	04/19/19 10:00	04/19/19 15:01	MEV	MET-1	2	B042195
3	EPA-300.0	04/18/19 13:00	04/18/19 19:48	KEB	IC8	2	B044054
4	EPA-300.0	04/18/19 13:00	04/18/19 20:29	KEB	IC8	5	B044054
5	SM-2540C	04/19/19 15:45	04/19/19 15:45	NW1	MANUAL	5	B044082
6	EPA-351.2	05/01/19 21:30	05/02/19 09:26	JMH	SC-1	1	B045155
7	EPA-350.1	05/07/19 08:18	05/07/19 13:33	JMH	SC-1	1	B045533
8	EPA-353.2	04/18/19 09:22	04/18/19 11:59	MC1	KONE-1	1	B044231
9	EPA-365.4	05/01/19 21:30	05/03/19 10:08	JMH	SC-1	1	B045157

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1912451-03	<b>Client Sample Name:</b> Giacomazzi, ZZI-MW9C, 4/17/2019 1:15:00PM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	16	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	3.1	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	70	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.30	mg/L	1.0	0.10	EPA-200.7	0.12	J	1
Bicarbonate Alkalinity as CaCO3	140	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	20	mg/L	0.50	0.15	EPA-300.0	ND		3
Nitrate as N	5.4	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	20	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	260	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.75	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.066	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	8.0	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/20/19 13:02	04/23/19 19:40	JRG	PE-OP2	1	B044372
2	SM-2320B	04/19/19 10:00	04/19/19 15:07	MEV	MET-1	1	B042195
3	EPA-300.0	04/18/19 13:00	04/18/19 20:08	KEB	IC8	1	B044054
4	SM-2540C	04/19/19 15:45	04/19/19 15:45	NW1	MANUAL	2	B044082
5	EPA-351.2	05/01/19 21:30	05/02/19 09:28	JMH	SC-1	1	B045155
6	EPA-350.1	05/07/19 08:18	05/07/19 13:35	JMH	SC-1	1	B045533
7	EPA-353.2	04/18/19 12:33	04/18/19 12:33	MC1	KONE-1	1	B044232
8	EPA-365.4	05/01/19 21:30	05/03/19 10:18	JMH	SC-1	5	B045157

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500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B042195</b>						
Bicarbonate Alkalinity as CaCO3	B042195-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B042195-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B042195-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B044054</b>						
Chloride	B044054-BLK1	ND	mg/L	0.50	0.15	
Nitrate as N	B044054-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B044054-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B044082</b>						
Total Dissolved Solids @ 180 C	B044082-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B044231</b>						
Nitrite as N	B044231-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B044232</b>						
Nitrite as N	B044232-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B044372</b>						
Dissolved Calcium	B044372-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B044372-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B044372-BLK1	ND	mg/L	0.50	0.051	
<b>Dissolved Potassium</b>	<b>B044372-BLK1</b>	<b>0.12348</b>	<b>mg/L</b>	<b>1.0</b>	<b>0.10</b>	<b>J</b>
<b>QC Batch ID: B044958</b>						
Dissolved Calcium	B044958-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B044958-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B044958-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B044958-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B045155</b>						
Total Kjeldahl Nitrogen	B045155-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B045157</b>						
Total Phosphate	B045157-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B045533</b>						
Ammonia as N	B045533-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B044054</b>										
Chloride	B044054-BS1	LCS	52.519	50.000	mg/L	105		90 - 110		
Nitrate as N	B044054-BS1	LCS	5.2720	5.0000	mg/L	105		90 - 110		
Sulfate	B044054-BS1	LCS	104.30	100.00	mg/L	104		90 - 110		
<b>QC Batch ID: B044082</b>										
Total Dissolved Solids @ 180 C	B044082-BS1	LCS	575.00	586.00	mg/L	98.1		90 - 110		
<b>QC Batch ID: B044231</b>										
Nitrite as N	B044231-BS1	LCS	0.51502	0.50000	mg/L	103		90 - 110		
<b>QC Batch ID: B044232</b>										
Nitrite as N	B044232-BS1	LCS	0.50318	0.50000	mg/L	101		90 - 110		
<b>QC Batch ID: B044372</b>										
Dissolved Calcium	B044372-BS1	LCS	9.7864	10.000	mg/L	97.9		85 - 115		
Dissolved Magnesium	B044372-BS1	LCS	9.5914	10.000	mg/L	95.9		85 - 115		
Dissolved Sodium	B044372-BS1	LCS	8.8373	10.000	mg/L	88.4		85 - 115		
Dissolved Potassium	B044372-BS1	LCS	8.9854	10.000	mg/L	89.9		85 - 115		
<b>QC Batch ID: B044958</b>										
Dissolved Calcium	B044958-BS1	LCS	9.8282	10.000	mg/L	98.3		85 - 115		
Dissolved Magnesium	B044958-BS1	LCS	9.8933	10.000	mg/L	98.9		85 - 115		
Dissolved Sodium	B044958-BS1	LCS	8.9069	10.000	mg/L	89.1		85 - 115		
Dissolved Potassium	B044958-BS1	LCS	8.9974	10.000	mg/L	90.0		85 - 115		
<b>QC Batch ID: B045155</b>										
Total Kjeldahl Nitrogen	B045155-BS1	LCS	2.0208	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B045157</b>										
Total Phosphate	B045157-BS1	LCS	3.4357	3.0660	mg/L	112		85 - 115		
<b>QC Batch ID: B045533</b>										
Ammonia as N	B045533-BS1	LCS	0.96070	1.0000	mg/L	96.1		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 05/10/2019 13:26  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Giacomazzi Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B042195</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1912433-01	253.15	257.71		mg/L	1.8		10	
Carbonate Alkalinity as CaCO3	DUP	1912433-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1912433-01	ND	ND		mg/L			10	
<b>QC Batch ID: B044054</b>		Used client sample: N								
Chloride	DUP	1912447-01	9.1470	9.1230		mg/L	0.3		10	
	MS	1912447-01	9.1470	64.444	50.505	mg/L		109		80 - 120
	MSD	1912447-01	9.1470	64.321	50.505	mg/L	0.2	109	10	80 - 120
Nitrate as N	DUP	1912447-01	2.4180	2.4180		mg/L	0		10	
	MS	1912447-01	2.4180	7.8444	5.0505	mg/L		107		80 - 120
	MSD	1912447-01	2.4180	7.7970	5.0505	mg/L	0.6	107	10	80 - 120
Sulfate	DUP	1912447-01	12.310	12.229		mg/L	0.7		10	
	MS	1912447-01	12.310	120.87	101.01	mg/L		107		80 - 120
	MSD	1912447-01	12.310	121.04	101.01	mg/L	0.1	108	10	80 - 120
<b>QC Batch ID: B044082</b>		Used client sample: Y - Description: ZZI-MW6D, 04/17/2019 12:25								
Total Dissolved Solids @ 180 C	DUP	1912451-02	1220.0	1230.0		mg/L	0.8		10	
<b>QC Batch ID: B044231</b>		Used client sample: N								
Nitrite as N	DUP	1912405-01	ND	ND		mg/L			10	
	MS	1912405-01	ND	0.56021	0.52632	mg/L		106		90 - 110
	MSD	1912405-01	ND	0.56070	0.52632	mg/L	0.1	107	10	90 - 110
<b>QC Batch ID: B044232</b>		Used client sample: Y - Description: ZZI-MW9C, 04/17/2019 13:15								
Nitrite as N	DUP	1912451-03	ND	ND		mg/L			10	
	MS	1912451-03	ND	0.54602	0.52632	mg/L		104		90 - 110
	MSD	1912451-03	ND	0.55522	0.52632	mg/L	1.7	105	10	90 - 110
<b>QC Batch ID: B044372</b>		Used client sample: N								
Dissolved Calcium	DUP	1912449-01	17.152	17.166		mg/L	0.1		20	
	MS	1912449-01	17.152	26.981	10.204	mg/L		96.3		85 - 115
	MSD	1912449-01	17.152	27.464	10.204	mg/L	1.8	101	20	85 - 115
Dissolved Magnesium	DUP	1912449-01	0.46201	0.45483		mg/L	1.6		20	
	MS	1912449-01	0.46201	10.161	10.204	mg/L		95.0		85 - 115
	MSD	1912449-01	0.46201	10.250	10.204	mg/L	0.9	95.9	20	85 - 115
Dissolved Sodium	DUP	1912449-01	62.995	62.976		mg/L	0.0		20	
	MS	1912449-01	62.995	72.719	10.204	mg/L		95.3		85 - 115
	MSD	1912449-01	62.995	73.558	10.204	mg/L	1.1	104	20	85 - 115
Dissolved Potassium	DUP	1912449-01	0.79728	0.71150		mg/L	11.4		20	J
	MS	1912449-01	0.79728	9.8754	10.204	mg/L		89.0		85 - 115
	MSD	1912449-01	0.79728	10.095	10.204	mg/L	2.2	91.1	20	85 - 115

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B044958</b>		Used client sample: N								
Dissolved Calcium	DUP	911546-01RE1	47.498	47.821		mg/L	0.7		20	
	MS	911546-01RE1	47.498	57.297	10.204	mg/L		96.0		85 - 115
	MSD	911546-01RE1	47.498	56.939	10.204	mg/L	0.6	92.5	20	85 - 115
Dissolved Magnesium	DUP	911546-01RE1	14.084	14.552		mg/L	3.3		20	
	MS	911546-01RE1	14.084	23.899	10.204	mg/L		96.2		85 - 115
	MSD	911546-01RE1	14.084	23.710	10.204	mg/L	0.8	94.3	20	85 - 115
Dissolved Sodium	DUP	911546-01RE1	75.695	76.176		mg/L	0.6		20	
	MS	911546-01RE1	75.695	85.965	10.204	mg/L		101		85 - 115
	MSD	911546-01RE1	75.695	85.444	10.204	mg/L	0.6	95.5	20	85 - 115
Dissolved Potassium	DUP	911546-01RE1	8.1773	8.1680		mg/L	0.1		20	
	MS	911546-01RE1	8.1773	17.583	10.204	mg/L		92.2		85 - 115
	MSD	911546-01RE1	8.1773	17.723	10.204	mg/L	0.8	93.6	20	85 - 115
<b>QC Batch ID: B045155</b>		Used client sample: Y - Description: ZZI-MW3B, 04/17/2019 12:55								
Total Kjeldahl Nitrogen	DUP	1912451-01	0.29720	0.30060		mg/L	1.1		20	
	MS	1912451-01	0.29720	2.3318	2.0000	mg/L		102		90 - 110
	MSD	1912451-01	0.29720	2.3743	2.0000	mg/L	1.8	104	20	90 - 110
<b>QC Batch ID: B045157</b>		Used client sample: Y - Description: ZZI-MW3B, 04/17/2019 12:55								
Total Phosphate	DUP	1912451-01	0.070216	0.084320		mg/L	18.3		20	J
	MS	1912451-01	0.070216	3.1634	3.0660	mg/L		101		80 - 120
	MSD	1912451-01	0.070216	3.1888	3.0660	mg/L	0.8	102	20	80 - 120
<b>QC Batch ID: B045533</b>		Used client sample: N								
Ammonia as N	DUP	1912449-01	0.058600	ND		mg/L			10	
	MS	1912449-01	0.058600	1.0894	1.1111	mg/L		92.8		90 - 110
	MSD	1912449-01	0.058600	1.1350	1.1111	mg/L	4.1	96.9	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 04/17/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: J & A Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1908291

Invoice ID: B336085

Enclosed are the results of analyses for samples received by the laboratory on 3/14/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000871659

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1908291

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



**BC Laboratories, Inc.**  
19-08291

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

**Chain of Custody**

**Report to:** Expanded Constituent Suite

**Analysis Requested**

Name: Luthdorff and Scalmani  
Address: 500 First Street  
City: Woodland  
State: 95695  
CA: Till Angermann  
Attn: Ryan Gustafson

Project: Dairy Representative Monitoring Program  
Site: J & A Dairy  
Samplers Name: Ryan Gustafson  
Global ID - WDR100038686

From Filtered Sample:  
Ammonia-N, NO3-N, NO2-N

From Filtered Sample:  
Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids

From Unfiltered Sample:  
Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl Pe Unpreserved	From Filtered Sample	From Filtered Sample	From Unfiltered Sample
1	JAD-MW1				X	X	X	X
2	JAD-MW2				X	X	X	X
3	JAD-MW3				X	X	X	X
4	JAD-MW4	3/14/19	11:56	W	X	X	X	X
5	JAD-MW5	3/14/19		W	X	X	X	X
6	JAD-MW6	3/14/19	10:16	W	X	X	X	X
7	JAD-MW7				X	X	X	X
8	Field Duplicate				X	X	X	X
9								
10								
11								

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45um) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luthdorff and Scalmani Consulting Engineers via email: llavagnino@lscsa.com, rbyerson@lscsa.com, pdchrlaw@lscsa.com, jlowells@lscsa.com  
 4) Send invoices to Jeanette Lovells (jlowells@lscsa.com).

(A)= Analysis (C)= Container (P)= Preservative

Relinquished by: (Signature) *[Signature]* Date & Time: 3/14/19 12:27

Relinquished by: (Signature) *[Signature]* Date & Time: 3/14/19 23:00

Relinquished by: (Signature) *[Signature]* Date & Time: 3/14/19 23:00

Received By: *[Signature]* Date & Time: 3/14/19 12:27

Received By: *[Signature]* Date & Time: 3/14/19 23:00

Received By: *[Signature]* Date & Time: 3/14/19 23:00

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 1908291

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 3/14 2300

Temperature: (A) 1.0 °C / (C) 0.9 °C Analyst Init: EML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	AB	AS								
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	L	C								
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/509/525Q										
QT EPA 515.1/515										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 3015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz IAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GSP Date/Time: 3/14 2320

A = Actual / C = Corrected

Rev 21 05/23/2016



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 14:37  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1908291-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/14/2019 23:00
	<b>Project Number:</b>	J&A Dairy	<b>Sampling Date:</b>	03/14/2019 11:56
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	JAD-MW4d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Ryan Gustafson of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1908291-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/14/2019 23:00
	<b>Project Number:</b>	J&A Dairy	<b>Sampling Date:</b>	03/14/2019 10:46
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	JAD-MW6d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Ryan Gustafson of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 14:37  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1908291-01		Client Sample Name: J&A Dairy, JAD-MW4d, 3/14/2019 11:56:00AM, Ryan Gustafson						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	100	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	10	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	77	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.68	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	330	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	25	mg/L	0.50	0.067	EPA-300.0	ND		3
Nitrate as N	14	mg/L	0.10	0.019	EPA-300.0	ND		3
Sulfate	54	mg/L	1.0	0.14	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	520	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.25	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.063	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	ND	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/15/19 13:42	03/18/19 14:05	JCC	PE-OP2	1	B040478
2	SM-2320B	03/18/19 07:00	03/18/19 12:05	MEV	MET-1	1	B031841
3	EPA-300.0	03/15/19 10:00	03/15/19 15:51	KEB	IC8	1	B040474
4	SM-2540C	03/19/19 13:00	03/19/19 13:00	CAD	MANUAL	3.333	B040758
5	EPA-351.2	03/28/19 21:00	04/01/19 13:28	JMH	SC-1	1	B041658
6	EPA-350.1	04/05/19 13:11	04/06/19 10:24	JMH	SC-1	1	B042751
7	EPA-353.2	03/15/19 09:30	03/15/19 09:33	MC1	KONE-1	1	B040595
8	EPA-365.4	03/28/19 21:00	04/02/19 07:39	JMH	SC-1	1	B041659

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500 First Street  
Woodland, CA 95695

Reported: 04/17/2019 14:37  
Project: Dairy Rep MP - Expanded Suite  
Project Number: J & A Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1908291-02		Client Sample Name: J&A Dairy, JAD-MW6d, 3/14/2019 10:46:00AM, Ryan Gustafson						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	6.5	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	110	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.7	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	310	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	54	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	26	mg/L	0.20	0.038	EPA-300.0	ND	A07	4
Sulfate	120	mg/L	2.0	0.28	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	760	mg/L	33	17	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.41	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.057	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	ND	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/15/19 13:42	03/18/19 14:07	JCC	PE-OP2	1	B040478
2	SM-2320B	03/18/19 07:00	03/18/19 12:11	MEV	MET-1	2	B031841
3	EPA-300.0	03/25/19 08:00	03/25/19 18:59	KEB	IC1	2	B041311
4	EPA-300.0	03/15/19 10:00	03/15/19 14:50	KEB	IC8	2	B040474
5	SM-2540C	03/19/19 13:00	03/19/19 13:00	CAD	MANUAL	3.333	B040758
6	EPA-351.2	03/28/19 21:00	04/01/19 13:32	JMH	SC-1	1	B041658
7	EPA-350.1	04/05/19 13:11	04/06/19 10:24	JMH	SC-1	1	B042751
8	EPA-353.2	03/15/19 09:30	03/15/19 09:33	MC1	KONE-1	1	B040595
9	EPA-365.4	03/28/19 21:00	04/02/19 07:41	JMH	SC-1	1	B041659

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Woodland, CA 95695

**Reported:** 04/17/2019 14:37  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031841</b>						
Bicarbonate Alkalinity as CaCO3	B031841-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031841-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031841-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B040474</b>						
Chloride	B040474-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B040474-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B040474-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B040478</b>						
Dissolved Calcium	B040478-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B040478-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B040478-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B040478-BLK2	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B040595</b>						
Nitrite as N	B040595-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B040758</b>						
Total Dissolved Solids @ 180 C	B040758-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B041311</b>						
Chloride	B041311-BLK1	ND	mg/L	0.50	0.067	
<b>QC Batch ID: B041658</b>						
Total Kjeldahl Nitrogen	B041658-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B041659</b>						
Total Phosphate	B041659-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B042751</b>						
Ammonia as N	B042751-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 14:37  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	Control Limits		Lab
							RPD	RPD	
<b>QC Batch ID: B040474</b>									
Chloride	B040474-BS1	LCS	51.193	50.000	mg/L	102		90 - 110	
Nitrate as N	B040474-BS1	LCS	4.9950	5.0000	mg/L	99.9		90 - 110	
Sulfate	B040474-BS1	LCS	101.21	100.00	mg/L	101		90 - 110	
<b>QC Batch ID: B040478</b>									
Dissolved Calcium	B040478-BS1	LCS	10.602	10.000	mg/L	106		85 - 115	
Dissolved Magnesium	B040478-BS1	LCS	10.522	10.000	mg/L	105		85 - 115	
Dissolved Sodium	B040478-BS1	LCS	9.7675	10.000	mg/L	97.7		85 - 115	
Dissolved Potassium	B040478-BS2	LCS	9.5349	10.000	mg/L	95.3		85 - 115	
<b>QC Batch ID: B040595</b>									
Nitrite as N	B040595-BS1	LCS	0.50557	0.50000	mg/L	101		90 - 110	
<b>QC Batch ID: B040758</b>									
Total Dissolved Solids @ 180 C	B040758-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110	
<b>QC Batch ID: B041311</b>									
Chloride	B041311-BS1	LCS	48.924	50.000	mg/L	97.8		90 - 110	
<b>QC Batch ID: B041658</b>									
Total Kjeldahl Nitrogen	B041658-BS1	LCS	2.1071	2.0000	mg/L	105		90 - 110	
<b>QC Batch ID: B041659</b>									
Total Phosphate	B041659-BS1	LCS	3.0604	3.0660	mg/L	99.8		85 - 115	
<b>QC Batch ID: B042751</b>									
Ammonia as N	B042751-BS1	LCS	0.99360	1.0000	mg/L	99.4		90 - 110	

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500 First Street  
Woodland, CA 95695

Reported: 04/17/2019 14:37  
Project: Dairy Rep MP - Expanded Suite  
Project Number: J & A Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	Control Limits			Lab Quals
							RPD	Percent Recovery	Percent Recovery	
<b>QC Batch ID: B031841</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1908299-01	314.00	311.87		mg/L	0.7		10	
Carbonate Alkalinity as CaCO3	DUP	1908299-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1908299-01	ND	ND		mg/L			10	
<b>QC Batch ID: B040474</b>		Used client sample: N								
Chloride	DUP	908299-01RE'	2592.7	2590.9		mg/L	0.1		10	
	MS	908299-01RE'	2592.7	3588.3	1010.1	mg/L		98.6		80 - 120
	MSD	908299-01RE'	2592.7	3584.7	1010.1	mg/L	0.1	98.2	10	80 - 120
Nitrate as N	DUP	908299-01RE'	27.340	27.480		mg/L	0.5		10	
	MS	908299-01RE'	27.340	130.93	101.01	mg/L		103		80 - 120
	MSD	908299-01RE'	27.340	130.46	101.01	mg/L	0.4	102	10	80 - 120
Sulfate	DUP	908299-01RE'	3988.3	3979.6		mg/L	0.2		10	
	MS	908299-01RE'	3988.3	6076.6	2020.2	mg/L		103		80 - 120
	MSD	908299-01RE'	3988.3	6042.7	2020.2	mg/L	0.6	102	10	80 - 120
<b>QC Batch ID: B040478</b>		Used client sample: N								
Dissolved Calcium	DUP	1907753-01	40.577	40.717		mg/L	0.3		20	
	MS	1907753-01	40.577	51.165	10.204	mg/L		104		85 - 115
	MSD	1907753-01	40.577	51.003	10.204	mg/L	0.3	102	20	85 - 115
Dissolved Magnesium	DUP	1907753-01	44.053	44.214		mg/L	0.4		20	
	MS	1907753-01	44.053	54.545	10.204	mg/L		103		85 - 115
	MSD	1907753-01	44.053	54.289	10.204	mg/L	0.5	100	20	85 - 115
Dissolved Sodium	DUP	1907753-01	28.807	28.825		mg/L	0.1		20	
	MS	1907753-01	28.807	39.204	10.204	mg/L		102		85 - 115
	MSD	1907753-01	28.807	39.317	10.204	mg/L	0.3	103	20	85 - 115
Dissolved Potassium	DUP	1907753-01	1.5294	1.4325		mg/L	6.5		20	
	MS	1907753-01	1.5294	11.748	10.204	mg/L		100		85 - 115
	MSD	1907753-01	1.5294	11.877	10.204	mg/L	1.1	101	20	85 - 115
<b>QC Batch ID: B040595</b>		Used client sample: N								
Nitrite as N	DUP	1908245-02	ND	ND		mg/L			10	
	MS	1908245-02	ND	0.54507	0.52632	mg/L		104		90 - 110
	MSD	1908245-02	ND	0.54579	0.52632	mg/L	0.1	104	10	90 - 110
<b>QC Batch ID: B040758</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1908245-03	990.00	980.00		mg/L	1.0		10	
<b>QC Batch ID: B041311</b>		Used client sample: N								
Chloride	DUP	1908279-02	112.15	112.11		mg/L	0.0		10	
	MS	1908279-02	112.15	160.14	50.505	mg/L		95.0		80 - 120
	MSD	1908279-02	112.15	160.40	50.505	mg/L	0.2	95.5	10	80 - 120

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 14:37  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B041658</b>		Used client sample: Y - Description: JAD-MW4d, 03/14/2019 11:56								
Total Kjeldahl Nitrogen	DUP	1908291-01	0.25130	0.24740		mg/L	1.6		20	
	MS	1908291-01	0.25130	2.3425	2.0000	mg/L		105		90 - 110
	MSD	1908291-01	0.25130	2.1138	2.0000	mg/L	10.3	93.1	20	90 - 110
<b>QC Batch ID: B041659</b>		Used client sample: Y - Description: JAD-MW4d, 03/14/2019 11:56								
Total Phosphate	DUP	1908291-01	ND	ND		mg/L			20	
	MS	1908291-01	ND	3.1211	3.0660	mg/L		102		80 - 120
	MSD	1908291-01	ND	3.0883	3.0660	mg/L	1.1	101	20	80 - 120
<b>QC Batch ID: B042751</b>		Used client sample: N								
Ammonia as N	DUP	1908245-02	0.053600	ND		mg/L			10	
	MS	1908245-02	0.053600	1.0924	1.1111	mg/L		93.5		90 - 110
	MSD	1908245-02	0.053600	1.1166	1.1111	mg/L	2.2	95.7	10	90 - 110

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500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 14:37  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 05/10/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Longfellow Farming  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1912450  
Invoice ID: B339506

Enclosed are the results of analyses for samples received by the laboratory on 4/18/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000884785

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1912450

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



**Chain of Custody**

4100 Atlas Ct.  
Bakersfield, CA 93308  
(861) 327-4911

**Report to:**  
Expanded Constituent Suite

Name: Lohdorff and Scalmanini  
Address: 500 First Street  
City: Woodland  
State: 95695  
CA  
Attn: Till Angermann  
Global ID - WDD100006573

Project: Dairy Representative Monitoring Program  
Site: Longfellow Farming Co.  
Samplers Name:  
Global ID - WDD100006573

**Analysis Requested**

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	From Filtered Sample:		From Unfiltered Sample:
					Ammonia-N, NO3-N, NO2-N	Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	
1	LON-MW1A, LON-MW1B, LON-MW1C	4/17/19	1110	WB		X	Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
2	LON-MW2A, LON-MW2B, LON-MW2C				X	X	
3	LON-MW3A, LON-MW3B, LON-MW3C				X	X	
4	LON-MW4A, LON-MW4B, LON-MW4C, LON-MW4D				X	X	
5	LON-MW5A, LON-MW5B, LON-MW5C				X	X	
6	LON-MW6A, LON-MW6B, LON-MW6C				X	X	
7	LON-MW7A, LON-MW7B, LON-MW7C, LON-MW7D				X	X	
8	-Field Duplicate-				X	X	
9					X	X	
10					X	X	
11					X	X	

From Filtered Sample: Ammonia-N, NO3-N, NO2-N  
 From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids  
 From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3

Retinquinished by: (Signature) *[Signature]*  
 Retinquinished by: (Signature) *[Signature]*  
 Retinquinished by: (Signature) *[Signature]*

CHK BY: *[Signature]*  
 SUBMIT: *[Signature]*  
 DISTRIBUTION: *[Signature]*

SHORT HOLDING TIME:  Cr<sup>6+</sup>  NO<sub>3</sub>  OP  SS  
 DO  Cl<sup>-</sup>  BOD  MMR  BOD

Date & Time: 4-19-19 0830  
 Date & Time: *[Signature]*  
 Date & Time: *[Signature]*

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Lohdorff and Scalmanini Consulting Engineers via email: lsc@lscce.com, rryson@lscce.com, pthaitwa@lscce.com, jlovelis@lscce.com  
 4) Send invoices to Jeannette Lovelis (jlovelis@lscce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-12450

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) Other

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.95 Container: pe Thermometer ID: 274 Date/Time: 4-18-19 0830  
 Temperature: (A) 1.0 °C / (C) 1.1 °C Analyst Init: KJG

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B									
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 891SM										
QT EPA 3270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: [Signature] Date/Time: 4/18/19 10:15  
 A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Longfellow Farming  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1912450-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/18/2019 08:30
	<b>Project Number:</b>	Longfellow	<b>Sampling Date:</b>	04/17/2019 11:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	LON-MW1C	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Longfellow Farming  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1912450-01		Client Sample Name: Longfellow, LON-MW1C, 4/17/2019 11:10:00AM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	75	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	4.5	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	95	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.50	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	220	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	87	mg/L	0.50	0.15	EPA-300.0	ND		3
Nitrate as N	14	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	38	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	490	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.14	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	ND	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/19 09:00	05/06/19 12:19	JRG	PE-OP2	1	B044958
2	SM-2320B	04/19/19 10:00	04/19/19 14:47	MEV	MET-1	1	B042195
3	EPA-300.0	04/18/19 13:00	04/18/19 19:12	KEB	IC5	1	B044148
4	SM-2540C	04/19/19 15:45	04/19/19 15:45	NW1	MANUAL	3.333	B044082
5	EPA-351.2	05/01/19 21:30	05/02/19 09:15	JMH	SC-1	1	B045153
6	EPA-350.1	05/07/19 08:18	05/07/19 13:40	JMH	SC-1	1	B045533
7	EPA-353.2	04/18/19 09:22	04/18/19 11:59	MC1	KONE-1	1	B044231
8	EPA-365.4	05/01/19 21:30	05/03/19 09:30	JMH	SC-1	1	B045154

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Longfellow Farming  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B042195</b>						
Bicarbonate Alkalinity as CaCO3	B042195-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B042195-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B042195-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B044082</b>						
Total Dissolved Solids @ 180 C	B044082-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B044148</b>						
Chloride	B044148-BLK1	ND	mg/L	0.50	0.15	
Nitrate as N	B044148-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B044148-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B044231</b>						
Nitrite as N	B044231-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B044958</b>						
Dissolved Calcium	B044958-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B044958-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B044958-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B044958-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B045153</b>						
Total Kjeldahl Nitrogen	B045153-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B045154</b>						
Total Phosphate	B045154-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B045533</b>						
Ammonia as N	B045533-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Longfellow Farming  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B044082</b>										
Total Dissolved Solids @ 180 C	B044082-BS1	LCS	575.00	586.00	mg/L	98.1		90 - 110		
<b>QC Batch ID: B044148</b>										
Chloride	B044148-BS1	LCS	52.581	50.000	mg/L	105		90 - 110		
Nitrate as N	B044148-BS1	LCS	5.2280	5.0000	mg/L	105		90 - 110		
Sulfate	B044148-BS1	LCS	103.88	100.00	mg/L	104		90 - 110		
<b>QC Batch ID: B044231</b>										
Nitrite as N	B044231-BS1	LCS	0.51502	0.50000	mg/L	103		90 - 110		
<b>QC Batch ID: B044958</b>										
Dissolved Calcium	B044958-BS1	LCS	9.8282	10.000	mg/L	98.3		85 - 115		
Dissolved Magnesium	B044958-BS1	LCS	9.8933	10.000	mg/L	98.9		85 - 115		
Dissolved Sodium	B044958-BS1	LCS	8.9069	10.000	mg/L	89.1		85 - 115		
Dissolved Potassium	B044958-BS1	LCS	8.9974	10.000	mg/L	90.0		85 - 115		
<b>QC Batch ID: B045153</b>										
Total Kjeldahl Nitrogen	B045153-BS1	LCS	1.9987	2.0000	mg/L	99.9		90 - 110		
<b>QC Batch ID: B045154</b>										
Total Phosphate	B045154-BS1	LCS	3.3826	3.0660	mg/L	110		85 - 115		
<b>QC Batch ID: B045533</b>										
Ammonia as N	B045533-BS1	LCS	0.96070	1.0000	mg/L	96.1		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 05/10/2019 13:13  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Longfellow Farming  
Project Manager: Till Angermann

### Water Analysis (General Chemistry) Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B042195</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1912433-01	253.15	257.71		mg/L	1.8		10	
Carbonate Alkalinity as CaCO3	DUP	1912433-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1912433-01	ND	ND		mg/L			10	
<b>QC Batch ID: B044082</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1912451-02	1220.0	1230.0		mg/L	0.8		10	
<b>QC Batch ID: B044148</b>		Used client sample: N								
Chloride	DUP	1912445-01	468.69	473.68		mg/L	1.1		10	
	MS	1912445-01	468.69	740.24	252.53	mg/L		108		80 - 120
	MSD	1912445-01	468.69	738.90	252.53	mg/L	0.2	107	10	80 - 120
Nitrate as N	DUP	1912445-01	6.0300	6.5050		mg/L	7.6		10	
	MS	1912445-01	6.0300	32.429	25.253	mg/L		105		80 - 120
	MSD	1912445-01	6.0300	32.955	25.253	mg/L	1.6	107	10	80 - 120
Sulfate	DUP	1912445-01	1312.5	1319.9		mg/L	0.6		10	
	MS	1912445-01	1312.5	1834.0	505.05	mg/L		103		80 - 120
	MSD	1912445-01	1312.5	1832.2	505.05	mg/L	0.1	103	10	80 - 120
<b>QC Batch ID: B044231</b>		Used client sample: N								
Nitrite as N	DUP	1912405-01	ND	ND		mg/L			10	
	MS	1912405-01	ND	0.56021	0.52632	mg/L		106		90 - 110
	MSD	1912405-01	ND	0.56070	0.52632	mg/L	0.1	107	10	90 - 110
<b>QC Batch ID: B044958</b>		Used client sample: N								
Dissolved Calcium	DUP	911546-01RE1	47.498	47.821		mg/L	0.7		20	
	MS	911546-01RE1	47.498	57.297	10.204	mg/L		96.0		85 - 115
	MSD	911546-01RE1	47.498	56.939	10.204	mg/L	0.6	92.5	20	85 - 115
Dissolved Magnesium	DUP	911546-01RE1	14.084	14.552		mg/L	3.3		20	
	MS	911546-01RE1	14.084	23.899	10.204	mg/L		96.2		85 - 115
	MSD	911546-01RE1	14.084	23.710	10.204	mg/L	0.8	94.3	20	85 - 115
Dissolved Sodium	DUP	911546-01RE1	75.695	76.176		mg/L	0.6		20	
	MS	911546-01RE1	75.695	85.965	10.204	mg/L		101		85 - 115
	MSD	911546-01RE1	75.695	85.444	10.204	mg/L	0.6	95.5	20	85 - 115
Dissolved Potassium	DUP	911546-01RE1	8.1773	8.1680		mg/L	0.1		20	
	MS	911546-01RE1	8.1773	17.583	10.204	mg/L		92.2		85 - 115
	MSD	911546-01RE1	8.1773	17.723	10.204	mg/L	0.8	93.6	20	85 - 115
<b>QC Batch ID: B045153</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1912406-01	0.14770	0.15530		mg/L	5.0		20	J
	MS	1912406-01	0.14770	2.0853	2.0000	mg/L		96.9		90 - 110
	MSD	1912406-01	0.14770	2.0675	2.0000	mg/L	0.9	96.0	20	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Longfellow Farming  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B045154</b>		Used client sample: N								
Total Phosphate	DUP	1912406-01	ND	ND		mg/L			20	
	MS	1912406-01	ND	3.0757	3.0660	mg/L		100		80 - 120
	MSD	1912406-01	ND	3.1389	3.0660	mg/L	2.0	102	20	80 - 120
<b>QC Batch ID: B045533</b>		Used client sample: N								
Ammonia as N	DUP	1912449-01	0.058600	ND		mg/L			10	
	MS	1912449-01	0.058600	1.0894	1.1111	mg/L		92.8		90 - 110
	MSD	1912449-01	0.058600	1.1350	1.1111	mg/L	4.1	96.9	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Longfellow Farming  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit





Date of Report: 04/17/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Longfellow Farming Co.  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1909794  
Invoice ID: B337115

Enclosed are the results of analyses for samples received by the laboratory on 3/28/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1909794

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		Chain of Custody						
4100 Atlas CL Bakersfield, CA 93308 (661) 327-4911		4100 Atlas CL Bakersfield, CA 93308 (661) 327-4911						
Report to:								
Expanded Constituent Suite								
Name:	Luhdorff and Scalmanini	Project:	Dairy Representative Monitoring Program					
Address:	500 First Street	Site:	Longfellow Farming Co.					
City:	Woodland	Samplers Name:	<i>Desley Sherman - Skokey</i>					
State:	95695	Global ID - WDD:	100006873					
CA:								
Attr:	Till Angermann							
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ck Pe Unpreserved	From Filtered Sample:	From Filtered Sample:	From Unfiltered Sample:
1	LON-MW1A, LON-MW1B				x			Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
2	LON-MW1C				x			
2	LON-MW2A, LON-MW2B	3/28/19	0830	WT	x			
	LON-MW2C				x			
3	LON-MW3A, LON-MW3B	3/28/19	0830	WT	x			
	LON-MW3C				x			
4	LON-MW4A, LON-MW4B	3/28/19	0835	WT	x			
	LON-MW4C, LON-MW4D				x			
5	LON-MW5A, LON-MW5B				x			
	LON-MW5C				x			
6	LON-MW6A, LON-MW6B			DISTRIBUTION	x			
	LON-MW6C			SUB OUT	x			
7	LON-MW7A, LON-MW7B				x			
	LON-MW7C, LON-MW7D				x			
8	Field Duplicate				x			
9								
10								
11								

Comments:

1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.

2) Lab reports shall identify sampled wells exactly as shown on this CoC.

3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: [javagnine@lscce.com](mailto:javagnine@lscce.com), [rtayson@lscce.com](mailto:rtayson@lscce.com), [pchalivel@lscce.com](mailto:pchalivel@lscce.com), [jlovelis@lscce.com](mailto:jlovelis@lscce.com)

4) Send invoices to Jeannette Lovellis ([jlovelis@lscce.com](mailto:jlovelis@lscce.com)).

Received by: <i>[Signature]</i>	Date & Time: 3/28/19 20:30
Relinquished by: <i>[Signature]</i>	Date & Time: 3/28/19 20:30
Relinquished by: <i>[Signature]</i>	Date & Time: 3/28/19 22:30

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 1909794

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify)

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify)

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals: None  Comments:

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.08 Container: PE Thermometer ID: 208 Date/Time: 3/28/2018

Temperature: (A) 2.6 °C / (C) 2.5 °C Analyst Init: FMC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B							
PT TOTAL SULFIDE										
2oz NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8050										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 543										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: Sample Numbering Completed By: GSP Date/Time: 3/28/2018

Actual / C = Corrected

Rev 21 05/23/2016



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500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 10:08  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1909794-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/28/2019 22:30
	<b>Project Number:</b>	Longfellow Farming Co.	<b>Sampling Date:</b>	03/28/2019 07:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	LON-MW2C	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of DTO	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1909794-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/28/2019 22:30
	<b>Project Number:</b>	Longfellow Farming Co.	<b>Sampling Date:</b>	03/28/2019 08:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	LON-MW3C	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of DTO	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1909794-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/28/2019 22:30
	<b>Project Number:</b>	Longfellow Farming Co.	<b>Sampling Date:</b>	03/28/2019 08:35
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	LON-MW4C	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of DTO	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1909794-01	Client Sample Name:	Longfellow Farming Co., LON-MW2C, 3/28/2019 7:30:00AM, Wesley Sherman-Shochley						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	ND		1	
Dissolved Magnesium	8.8	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	140	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	0.82	mg/L	1.0	0.10	EPA-200.7	ND	J	1	
Bicarbonate Alkalinity as CaCO3	320	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	230	mg/L	1.0	0.30	EPA-300.0	ND	A07	3	
Nitrate as N	6.4	mg/L	0.20	0.084	EPA-300.0	ND	A07	3	
Sulfate	51	mg/L	2.0	0.40	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	700	mg/L	50	25	SM-2540C	ND		4	
Total Kjeldahl Nitrogen	0.49	mg/L	0.20	0.036	EPA-351.2	ND		5	
Ammonia as N	0.28	mg/L	0.20	0.050	EPA-350.1	ND		6	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7	
Total Phosphate	0.48	mg/L	0.15	0.050	EPA-365.4	ND		8	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/08/19 13:09	04/11/19 14:32	JRG	PE-OP2	1	B042961
2	SM-2320B	04/02/19 07:00	04/02/19 10:16	MEV	MET-1	2	B041697
3	EPA-300.0	03/29/19 08:00	03/29/19 14:04	KEB	IC2	2	B041729
4	SM-2540C	04/01/19 13:30	04/01/19 13:30	CAD	MANUAL	5	B041907
5	EPA-351.2	04/11/19 08:00	04/16/19 13:50	JMH	SC-1	1	B043303
6	EPA-350.1	04/10/19 06:26	04/10/19 09:58	JMH	SC-1	1	B043179
7	EPA-353.2	03/29/19 09:37	03/29/19 10:03	MC1	KONE-1	1	B041892
8	EPA-365.4	04/11/19 08:00	04/16/19 17:20	JMH	SC-1	1	B043304

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**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1909794-02		Client Sample Name: Longfellow Farming Co., LON-MW3C, 3/28/2019 8:00:00AM, Wesley Sherman-Shochley						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	170	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	9.4	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	180	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.76	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	260	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	330	mg/L	1.0	0.30	EPA-300.0	ND	A07	3
Nitrate as N	13	mg/L	0.20	0.084	EPA-300.0	ND	A07	3
Sulfate	140	mg/L	2.0	0.40	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.75	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.27	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.8	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/08/19 13:09	04/11/19 14:34	JRG	PE-OP2	1	B042961
2	SM-2320B	04/02/19 07:00	04/02/19 10:22	MEV	MET-1	2	B041697
3	EPA-300.0	03/29/19 08:00	03/29/19 14:25	KEB	IC2	2	B041729
4	SM-2540C	04/01/19 13:30	04/01/19 13:30	CAD	MANUAL	5	B041907
5	EPA-351.2	04/11/19 08:00	04/16/19 13:51	JMH	SC-1	1	B043303
6	EPA-350.1	04/10/19 06:26	04/10/19 10:00	JMH	SC-1	1	B043179
7	EPA-353.2	03/29/19 09:37	03/29/19 10:03	MC1	KONE-1	1	B041892
8	EPA-365.4	04/11/19 08:00	04/16/19 17:20	JMH	SC-1	1	B043304

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Reported: 04/17/2019 10:08  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Longfellow Farming Co.  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909794-03	<b>Client Sample Name:</b> Longfellow Farming Co., LON-MW4C, 3/28/2019 8:35:00AM, Wesley Sherman-Shochley
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	200	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	20	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	250	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.1	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	360	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	390	mg/L	2.5	0.75	EPA-300.0	ND	A07	3
Nitrate as N	57	mg/L	0.50	0.21	EPA-300.0	ND	A07	3
Sulfate	110	mg/L	5.0	1.0	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.33	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	ND	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/08/19 13:09	04/11/19 14:37	JRG	PE-OP2	1	B042961
2	SM-2320B	04/02/19 07:00	04/02/19 10:03	MEV	MET-1	2	B041697
3	EPA-300.0	03/29/19 08:00	03/29/19 14:46	KEB	IC2	5	B041729
4	SM-2540C	04/01/19 13:30	04/01/19 13:30	CAD	MANUAL	10	B041907
5	EPA-351.2	04/11/19 08:00	04/16/19 13:51	JMH	SC-1	1	B043303
6	EPA-350.1	04/10/19 06:26	04/10/19 10:02	JMH	SC-1	1	B043179
7	EPA-353.2	03/29/19 09:37	03/29/19 10:03	MC1	KONE-1	1	B041892
8	EPA-365.4	04/11/19 08:00	04/16/19 17:21	JMH	SC-1	1	B043304

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**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B041697</b>						
Bicarbonate Alkalinity as CaCO3	B041697-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B041697-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B041697-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B041729</b>						
Chloride	B041729-BLK1	ND	mg/L	0.50	0.15	
Nitrate as N	B041729-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B041729-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B041892</b>						
Nitrite as N	B041892-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B041907</b>						
Total Dissolved Solids @ 180 C	B041907-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B042961</b>						
Dissolved Calcium	B042961-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B042961-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B042961-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B042961-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B043179</b>						
Ammonia as N	B043179-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B043303</b>						
Total Kjeldahl Nitrogen	B043303-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B043304</b>						
Total Phosphate	B043304-BLK1	ND	mg/L	0.15	0.050	

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**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B041729</b>										
Chloride	B041729-BS1	LCS	51.122	50.000	mg/L	102		90 - 110		
Nitrate as N	B041729-BS1	LCS	5.0220	5.0000	mg/L	100		90 - 110		
Sulfate	B041729-BS1	LCS	102.24	100.00	mg/L	102		90 - 110		
<b>QC Batch ID: B041892</b>										
Nitrite as N	B041892-BS1	LCS	0.48456	0.50000	mg/L	96.9		90 - 110		
<b>QC Batch ID: B041907</b>										
Total Dissolved Solids @ 180 C	B041907-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B042961</b>										
Dissolved Calcium	B042961-BS1	LCS	9.8014	10.000	mg/L	98.0		85 - 115		
Dissolved Magnesium	B042961-BS1	LCS	9.7815	10.000	mg/L	97.8		85 - 115		
Dissolved Sodium	B042961-BS1	LCS	8.6026	10.000	mg/L	86.0		85 - 115		
Dissolved Potassium	B042961-BS1	LCS	8.6190	10.000	mg/L	86.2		85 - 115		
<b>QC Batch ID: B043179</b>										
Ammonia as N	B043179-BS1	LCS	1.0015	1.0000	mg/L	100		90 - 110		
<b>QC Batch ID: B043303</b>										
Total Kjeldahl Nitrogen	B043303-BS1	LCS	1.9157	2.0000	mg/L	95.8		90 - 110		
<b>QC Batch ID: B043304</b>										
Total Phosphate	B043304-BS1	LCS	3.0423	3.0660	mg/L	99.2		85 - 115		

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Project Manager: Till Angermann

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B041697</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1909794-03	363.29	362.08		mg/L	0.3		10	
Carbonate Alkalinity as CaCO3	DUP	1909794-03	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1909794-03	ND	ND		mg/L			10	
<b>QC Batch ID: B041729</b>		Used client sample: N								
Chloride	DUP	1909793-01	11.461	11.383		mg/L	0.7		10	
	MS	1909793-01	11.461	66.277	50.505	mg/L		109		80 - 120
	MSD	1909793-01	11.461	66.209	50.505	mg/L	0.1	108	10	80 - 120
Nitrate as N	DUP	1909793-01	1.8040	1.8070		mg/L	0.2		10	
	MS	1909793-01	1.8040	7.0434	5.0505	mg/L		104		80 - 120
	MSD	1909793-01	1.8040	7.0838	5.0505	mg/L	0.6	105	10	80 - 120
Sulfate	DUP	1909793-01	13.621	13.487		mg/L	1.0		10	
	MS	1909793-01	13.621	119.18	101.01	mg/L		105		80 - 120
	MSD	1909793-01	13.621	119.11	101.01	mg/L	0.1	104	10	80 - 120
<b>QC Batch ID: B041892</b>		Used client sample: N								
Nitrite as N	DUP	1909723-01	ND	ND		mg/L			10	
	MS	1909723-01	ND	0.53904	0.52632	mg/L		102		90 - 110
	MSD	1909723-01	ND	0.53971	0.52632	mg/L	0.1	103	10	90 - 110
<b>QC Batch ID: B041907</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1909773-01	30700	30500		mg/L	0.7		10	
<b>QC Batch ID: B042961</b>		Used client sample: N								
Dissolved Calcium	DUP	1910472-04	ND	0.031369		mg/L			20	J
	MS	1910472-04	ND	9.9736	10.204	mg/L		97.7		85 - 115
	MSD	1910472-04	ND	10.019	10.204	mg/L	0.5	98.2	20	85 - 115
Dissolved Magnesium	DUP	1910472-04	ND	ND		mg/L			20	
	MS	1910472-04	ND	9.9943	10.204	mg/L		97.9		85 - 115
	MSD	1910472-04	ND	10.057	10.204	mg/L	0.6	98.6	20	85 - 115
Dissolved Sodium	DUP	1910472-04	0.11246	0.11200		mg/L	0.4		20	J
	MS	1910472-04	0.11246	8.9812	10.204	mg/L		86.9		85 - 115
	MSD	1910472-04	0.11246	8.9434	10.204	mg/L	0.4	86.5	20	85 - 115
Dissolved Potassium	DUP	1910472-04	ND	ND		mg/L			20	
	MS	1910472-04	ND	9.1114	10.204	mg/L		89.3		85 - 115
	MSD	1910472-04	ND	9.1377	10.204	mg/L	0.3	89.5	20	85 - 115
<b>QC Batch ID: B043179</b>		Used client sample: N								
Ammonia as N	DUP	1909793-03	0.051000	ND		mg/L			10	
	MS	1909793-03	0.051000	1.1791	1.1111	mg/L		102		90 - 110
	MSD	1909793-03	0.051000	1.1454	1.1111	mg/L	2.9	98.5	10	90 - 110

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**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B043303</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1909793-01	0.19920	0.12920		mg/L	42.6		20	J,A02
	MS	1909793-01	0.19920	2.1203	2.0000	mg/L		96.1	90 - 110	
	MSD	1909793-01	0.19920	2.1884	2.0000	mg/L	3.2	99.5	20 90 - 110	
<b>QC Batch ID: B043304</b>		Used client sample: N								
Total Phosphate	DUP	1909793-01	0.24131	0.25112		mg/L	4.0		20	
	MS	1909793-01	0.24131	3.2278	3.0660	mg/L		97.4	80 - 120	
	MSD	1909793-01	0.24131	3.3146	3.0660	mg/L	2.7	100	20 80 - 120	

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Woodland, CA 95695

**Reported:** 04/17/2019 10:08  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 04/22/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Machado Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1910134

Invoice ID: B337683

Enclosed are the results of analyses for samples received by the laboratory on 4/1/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1910134

Samples were filtered through a 0.45 micron filter for requested analysis.



**Chain of Custody**

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

**BC Laboratories, Inc.**

Report to: Expanded Constituent Suite

Name: Luhdorff and Scalmanini  
Address: 500 First Street  
City: Woodland  
State: 95695  
CA  
Attn: Till Angermann

Project: Dairy Representative Monitoring Program  
Site: Machado Dairy  
Samplers Name: Ryan Gutkefer  
Global ID - WDR100038666

Lab #	Strike out-non-sampled wells	Date Sampled	Time Sampled	Matrix	Qt/Pc Unpreserved	From Filtered Sample: Ammonia-N, NO3-N, NO2-N	From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
-1	ADO-MW1b, ADO-MW1d	3/31/19	1203	W	x	x	x	x
-2	ADO-MW2a, ADO-MW2d	3/31/19	1131	W	x	x	x	x
3 (2)	Field Duplicate				x	x	x	x
4								
5								
6								
7								
8								
9								
10								

SHORT HOLDING TIME  
Cr<sup>6</sup> (NO<sub>3</sub>) OP SS CHIKBY DISTRIBUTION  
DO Cl<sub>2</sub> BOD MBAS COT

Relinquished by: (Signature) *[Signature]* Date & Time 3/31/19 1545  
Relinquished by: (Signature) *[Signature]* Date & Time 4-1-19 1105  
Relinquished by: (Signature) *[Signature]* Date & Time 4/1/19 18:30

Comments:  
1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
2) Lab reports shall identify sampler wells exactly as shown on this CoC.  
3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagrn@lisce.com, rnyson@lisce.com, pdhalwal@lisce.com, jllovelis@lisce.com  
4) Send invoices to Jeanette Lovelis (jlovelis@lisce.com).

(A)= Analysis (C)= Container (P)= Preservative

REL. *[Signature]* 4/1/19 2:50  
Gupta *[Signature]* 4/1/19 2:50

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BC LABORATORIES INC. COOLER RECEIPT FORM

Submission #: 19-10134 Page      Of     

SHIPPING INFORMATION  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

FREE LIQUID  
 YES  NO   
 W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: For Chest  Containers:   
 Intact? Yes  No  Intact? Yes  No  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 4/1 2:50  
 Temperature: (A) 2.6 °C / (C) 2.5 °C Analyst Init: EMK

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	AB	AB								
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE	C	C								
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/605/805										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: EMK Date/Time: 4-1-19 2205

A = Actual / C = Corrected

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/22/2019 11:51  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1910134-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/01/2019 21:50
	<b>Project Number:</b>	Machado Dairy	<b>Sampling Date:</b>	03/31/2019 12:03
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ADO-MW1d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	ryan Gustafson of BTSS	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1910134-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/01/2019 21:50
	<b>Project Number:</b>	Machado Dairy	<b>Sampling Date:</b>	03/31/2019 11:31
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ADO-MW2d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	ryan Gustafson of BTSS	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

Reported: 04/22/2019 11:51  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Machado Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1910134-01	Client Sample Name:	Machado Dairy, ADO-MW1d, 3/31/2019 12:03:00PM, ryan Gustafson						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	120	mg/L	0.10	0.016	EPA-200.7	ND		1	
Dissolved Magnesium	59	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	42	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	6.9	mg/L	1.0	0.10	EPA-200.7	ND		1	
Bicarbonate Alkalinity as CaCO3	390	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	92	mg/L	0.50	0.15	EPA-300.0	ND		3	
Nitrate as N	24	mg/L	0.20	0.084	EPA-300.0	ND	A07	4	
Sulfate	64	mg/L	1.0	0.20	EPA-300.0	ND		3	
Total Dissolved Solids @ 180 C	760	mg/L	50	25	SM-2540C	ND		5	
Total Kjeldahl Nitrogen	0.32	mg/L	0.20	0.036	EPA-351.2	0.052		6	
Ammonia as N	0.092	mg/L	0.20	0.050	EPA-350.1	ND	J	7	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8	
Total Phosphate	0.21	mg/L	0.15	0.050	EPA-365.4	ND		9	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/03/19 12:48	04/10/19 14:36	JRG	PE-OP2	1	B043016
2	SM-2320B	04/03/19 08:00	04/03/19 13:14	MEV	MET-1	2	B042104
3	EPA-300.0	04/01/19 21:00	04/02/19 10:05	SAV	IC2	1	B041973
4	EPA-300.0	04/01/19 21:00	04/02/19 02:32	SAV	IC2	2	B041973
5	SM-2540C	04/03/19 13:00	04/03/19 13:00	CAD	MANUAL	5	B042543
6	EPA-351.2	04/15/19 20:00	04/17/19 09:58	JMH	SC-1	1	B043707
7	EPA-350.1	04/10/19 12:00	04/12/19 18:25	JMH	SC-1	1	B043235
8	EPA-353.2	04/02/19 09:22	04/02/19 09:22	MC1	KONE-1	1	B042515
9	EPA-365.4	04/15/19 20:00	04/18/19 14:12	JMH	SC-1	1	B043708

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500 First Street  
Woodland, CA 95695

**Reported:** 04/22/2019 11:51  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1910134-02		Client Sample Name: Machado Dairy, ADO-MW2d, 3/31/2019 11:31:00AM, ryan Gustafson						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	110	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	58	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	44	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	6.6	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	430	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	83	mg/L	0.50	0.15	EPA-300.0	ND		3
Nitrate as N	15	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	44	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	700	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.31	mg/L	0.20	0.036	EPA-351.2	0.052		5
Ammonia as N	0.084	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.18	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/03/19 12:50	04/10/19 15:24	JRG	PE-OP2	1	B043016
2	SM-2320B	04/03/19 08:00	04/03/19 12:25	MEV	MET-1	2	B042104
3	EPA-300.0	04/01/19 21:00	04/02/19 10:26	SAV	IC2	1	B041973
4	SM-2540C	04/03/19 13:00	04/03/19 13:00	CAD	MANUAL	5	B042543
5	EPA-351.2	04/15/19 20:00	04/17/19 09:41	JMH	SC-1	1	B043707
6	EPA-350.1	04/10/19 12:00	04/12/19 18:27	JMH	SC-1	1	B043235
7	EPA-353.2	04/02/19 09:22	04/02/19 09:22	MC1	KONE-1	1	B042515
8	EPA-365.4	04/15/19 20:00	04/18/19 14:15	JMH	SC-1	1	B043708

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500 First Street  
Woodland, CA 95695

**Reported:** 04/22/2019 11:51  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B041973</b>						
Chloride	B041973-BLK1	ND	mg/L	0.50	0.15	
Nitrate as N	B041973-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B041973-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B042104</b>						
Bicarbonate Alkalinity as CaCO3	B042104-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B042104-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B042104-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B042515</b>						
Nitrite as N	B042515-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B042543</b>						
Total Dissolved Solids @ 180 C	B042543-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B043016</b>						
Dissolved Calcium	B043016-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B043016-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B043016-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B043016-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B043235</b>						
Ammonia as N	B043235-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B043707</b>						
Total Kjeldahl Nitrogen	B043707-BLK1	0.052200	mg/L	0.20	0.036	J
<b>QC Batch ID: B043708</b>						
Total Phosphate	B043708-BLK1	ND	mg/L	0.15	0.050	

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Woodland, CA 95695

**Reported:** 04/22/2019 11:51  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B041973</b>										
Chloride	B041973-BS1	LCS	52.442	50.000	mg/L	105		90 - 110		
Nitrate as N	B041973-BS1	LCS	5.2220	5.0000	mg/L	104		90 - 110		
Sulfate	B041973-BS1	LCS	105.55	100.00	mg/L	106		90 - 110		
<b>QC Batch ID: B042515</b>										
Nitrite as N	B042515-BS1	LCS	0.49379	0.50000	mg/L	98.8		90 - 110		
<b>QC Batch ID: B042543</b>										
Total Dissolved Solids @ 180 C	B042543-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B043016</b>										
Dissolved Calcium	B043016-BS1	LCS	10.096	10.000	mg/L	101		85 - 115		
Dissolved Magnesium	B043016-BS1	LCS	10.018	10.000	mg/L	100		85 - 115		
Dissolved Sodium	B043016-BS1	LCS	8.9233	10.000	mg/L	89.2		85 - 115		
Dissolved Potassium	B043016-BS1	LCS	9.0873	10.000	mg/L	90.9		85 - 115		
<b>QC Batch ID: B043235</b>										
Ammonia as N	B043235-BS1	LCS	0.96910	1.0000	mg/L	96.9		90 - 110		
<b>QC Batch ID: B043707</b>										
Total Kjeldahl Nitrogen	B043707-BS1	LCS	2.0123	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B043708</b>										
Total Phosphate	B043708-BS1	LCS	2.9871	3.0660	mg/L	97.4		85 - 115		

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Woodland, CA 95695

Reported: 04/22/2019 11:51  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Machado Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B041973</b>		Used client sample: N								
Chloride	DUP	1910017-02	72.133	72.373		mg/L	0.3		10	
	MS	1910017-02	72.133	125.10	50.505	mg/L		105		80 - 120
	MSD	1910017-02	72.133	125.21	50.505	mg/L	0.1	105	10	80 - 120
Nitrate as N	DUP	1910017-02	ND	ND		mg/L			10	
	MS	1910017-02	ND	5.1535	5.0505	mg/L		102		80 - 120
	MSD	1910017-02	ND	5.1232	5.0505	mg/L	0.6	101	10	80 - 120
Sulfate	DUP	1910017-02	109.45	108.53		mg/L	0.8		10	
	MS	1910017-02	109.45	217.31	101.01	mg/L		107		80 - 120
	MSD	1910017-02	109.45	218.18	101.01	mg/L	0.4	108	10	80 - 120
<b>QC Batch ID: B042104</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1910134-02	427.49	427.19		mg/L	0.1		10	
Carbonate Alkalinity as CaCO3	DUP	1910134-02	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1910134-02	ND	ND		mg/L			10	
<b>QC Batch ID: B042515</b>		Used client sample: Y - Description: ADO-MW1d, 03/31/2019 12:03								
Nitrite as N	DUP	1910134-01	ND	ND		mg/L			10	
	MS	1910134-01	ND	0.52618	0.52632	mg/L		100		90 - 110
	MSD	1910134-01	ND	0.53359	0.52632	mg/L	1.4	101	10	90 - 110
<b>QC Batch ID: B042543</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1910095-01	12300	12600		mg/L	2.4		10	
<b>QC Batch ID: B043016</b>		Used client sample: Y - Description: ADO-MW1d, 03/31/2019 12:03								
Dissolved Calcium	DUP	1910134-01	117.25	117.06		mg/L	0.2		20	
	MS	1910134-01	117.25	126.40	10.204	mg/L		89.6		85 - 115
	MSD	1910134-01	117.25	127.03	10.204	mg/L	0.5	95.8	20	85 - 115
Dissolved Magnesium	DUP	1910134-01	58.558	58.889		mg/L	0.6		20	
	MS	1910134-01	58.558	68.964	10.204	mg/L		102		85 - 115
	MSD	1910134-01	58.558	69.289	10.204	mg/L	0.5	105	20	85 - 115
Dissolved Sodium	DUP	1910134-01	42.069	41.766		mg/L	0.7		20	
	MS	1910134-01	42.069	51.575	10.204	mg/L		93.2		85 - 115
	MSD	1910134-01	42.069	51.766	10.204	mg/L	0.4	95.0	20	85 - 115
Dissolved Potassium	DUP	1910134-01	6.9274	6.9078		mg/L	0.3		20	
	MS	1910134-01	6.9274	16.992	10.204	mg/L		98.6		85 - 115
	MSD	1910134-01	6.9274	17.084	10.204	mg/L	0.5	99.5	20	85 - 115
<b>QC Batch ID: B043235</b>		Used client sample: N								
Ammonia as N	DUP	1909846-01	0.24210	0.19030		mg/L	24.0		10	J,A02
	MS	1909846-01	0.24210	1.2815	1.0000	mg/L		104		90 - 110
	MSD	1909846-01	0.24210	1.3112	1.0000	mg/L	2.3	107	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/22/2019 11:51  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B043707</b>		Used client sample: Y - Description: ADO-MW1d, 03/31/2019 12:03								
Total Kjeldahl Nitrogen	DUP	1910134-01	0.31940	0.30870		mg/L	3.4		20	
	MS	1910134-01	0.31940	2.4583	2.0000	mg/L		107		90 - 110
	MSD	1910134-01	0.31940	2.0194	2.0000	mg/L	19.6	85.0	20	90 - 110 Q03
<b>QC Batch ID: B043708</b>		Used client sample: Y - Description: ADO-MW1d, 03/31/2019 12:03								
Total Phosphate	DUP	1910134-01	0.20544	0.10732		mg/L	62.7		20	J,Q01
	MS	1910134-01	0.20544	3.0870	3.0660	mg/L		94.0		80 - 120
	MSD	1910134-01	0.20544	3.1073	3.0660	mg/L	0.7	94.6	20	80 - 120

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**Reported:** 04/22/2019 11:51  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q01 Sample precision is not within the control limits.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 04/17/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Manuel and Alda Lawrence Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1909044

Invoice ID: B336523

Enclosed are the results of analyses for samples received by the laboratory on 3/21/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000873312

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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### Quality Control Reports

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## Case Narratives

### Case Narrative for Work Order 1909044

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		Chain of Custody					
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Analysis Requested					
<b>Report to:</b> Expanded Constituent Suite Project: Dairy Representative Monitoring Program Site: Manuel and Aida Lawrence Dairy Samplers Name: <i>Edward H</i> Global ID - WDR100039118							
Name: Luthdorff and Scalmanini Address: 500 First Street City: Woodland State: 95695 CA Attn: Till Angermann		From Filtered Sample: Ammonia-N, NO3-N, NO2-N	From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3			
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl	Pe	Unpreserved
1	MAL-MW1 -1	3/4/11	14:55	W			X
2	MAL-MW2 -2		14:00				X
3	MAL-MW3						X
4	MAL-MW4 -3		13:10				X
5	MAL-MW5 -4		14:35				X
6	MAL-MW6 -5		11:15				X
7	MAL-MW7 -6		10:10				X
8	MAL-MW8 -7		12:30				X
9	Field Duplicate -8		12:00				X
10							
11							
12							
<b>Comments:</b> 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luthdorff and Scalmanini Consulting Engineers via email: llsc@lsc.com, rlryson@lsc.com, potatival@lsc.com. 4) Send invoices to Jesnette Lovelis (jlovelis@lsc.com). (A)= Analysis (C)= Container (P)= Preservative							
Relinquished by: (Signature) <i>[Signature]</i>				Received by: <i>[Signature]</i> Date & Time 3/21/19 20:50			
Relinquished by: (Signature) <i>[Signature]</i>				Received by: <i>[Signature]</i> Date & Time 3/21/19 22:30			
Relinquished by: (Signature) <i>[Signature]</i>				Received by: <i>[Signature]</i> Date & Time			

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-09044

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 3/21/2016  
 Temperature: (A) 2.8 °C / (C) 27 °C Analyst Init: EML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B	B	B	B	B	B		
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 505/508/5080										
QT RPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 5015M										
QT EPA 3270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

SHORT HOLDING TIME  
 Cr<sup>6</sup> NO<sub>2</sub> OP SS  
 DO Cl<sub>2</sub> BOD MBAS COC  
 CHG BY: [Signature]  
 DISTRIBUTION: [Signature]  
 SUB-OUT: [Signature]

Comments: \_\_\_\_\_

Sample Numbering Completed By: [Signature] Date/Time: 3-21-16 2240 Rev 21 05/23/2016

A = Actual / C = Corrected

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1909044-01	<b>COC Number:</b>	---	<b>Receive Date:</b> 03/21/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Lawrence	<b>Sampling Date:</b> 03/21/2019 14:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	MAL-MW1	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b> Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1909044-02	<b>COC Number:</b>	---	<b>Receive Date:</b> 03/21/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Lawrence	<b>Sampling Date:</b> 03/21/2019 14:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	MAL-MW2	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b> Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1909044-03	<b>COC Number:</b>	---	<b>Receive Date:</b> 03/21/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Lawrence	<b>Sampling Date:</b> 03/21/2019 13:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	MAL-MW4	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b> Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1909044-04	<b>COC Number:</b>	---	<b>Receive Date:</b> 03/21/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Lawrence	<b>Sampling Date:</b> 03/21/2019 14:35
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	MAL-MW5	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b> Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1909044-05	<b>COC Number:</b>	---	<b>Receive Date:</b> 03/21/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Lawrence	<b>Sampling Date:</b> 03/21/2019 11:15
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	MAL-MW6	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b> Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1909044-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/21/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Lawrence	<b>Sampling Date:</b>	03/21/2019 10:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAL-MW7	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1909044-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/21/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Lawrence	<b>Sampling Date:</b>	03/21/2019 12:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAL-MW8	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1909044-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/21/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Lawrence	<b>Sampling Date:</b>	03/21/2019 12:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909044-01	<b>Client Sample Name:</b> Manuel and Alda Lawrence, MAL-MW1, 3/21/2019 2:55:00PM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	30	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	8.3	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	580	mg/L	0.50	0.051	EPA-200.7	ND		2
Dissolved Potassium	0.90	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	950	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	76	mg/L	1.0	0.13	EPA-300.0	ND		4
Nitrate as N	44	mg/L	0.50	0.095	EPA-300.0	ND	A07	5
Sulfate	410	mg/L	2.0	0.28	EPA-300.0	ND		4
Total Dissolved Solids @ 180 C	2100	mg/L	100	50	SM-2540C	ND		6
Total Kjeldahl Nitrogen	0.60	mg/L	0.20	0.036	EPA-351.2	ND		7
Ammonia as N	0.059	mg/L	0.20	0.050	EPA-350.1	ND	J	8
Nitrite as N	0.017	mg/L	0.050	0.010	EPA-353.2	ND	J	9
Total Phosphate	3.5	mg/L	0.15	0.050	EPA-365.4	ND		10

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/25/19 09:45	04/03/19 18:57	JRG	PE-OP2	1	B041651
2	EPA-200.7	03/25/19 09:45	04/04/19 13:21	JRG	PE-OP2	1	B041651
3	SM-2320B	03/25/19 06:00	03/25/19 08:36	MEV	MET-1	2	B031876
4	EPA-300.0	03/21/19 21:00	03/22/19 05:46	SAV	IC2	2	B041085
5	EPA-300.0	03/21/19 21:00	03/22/19 11:36	KEB	IC2	5	B041085
6	SM-2540C	03/26/19 12:00	03/26/19 12:00	CAD	MANUAL	10	B041386
7	EPA-351.2	04/02/19 23:00	04/04/19 16:03	JMH	SC-1	1	B042092
8	EPA-350.1	04/09/19 10:52	04/09/19 15:13	JMH	SC-1	1	B043079
9	EPA-353.2	03/22/19 08:48	03/22/19 09:07	MC1	KONE-1	1	B041289
10	EPA-365.4	04/02/19 23:00	04/05/19 15:12	JMH	SC-1	1	B042093

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Woodland, CA 95695

Reported: 04/17/2019 15:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Manuel and Alda Lawrence Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909044-02	<b>Client Sample Name:</b> Manuel and Alda Lawrence, MAL-MW2, 3/21/2019 2:00:00PM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	200	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	63	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	500	mg/L	0.50	0.051	EPA-200.7	ND		2
Dissolved Potassium	1.2	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	930	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	240	mg/L	5.0	0.67	EPA-300.0	ND	A07	4
Nitrate as N	160	mg/L	1.0	0.19	EPA-300.0	ND	A07	4
Sulfate	250	mg/L	10	1.4	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	2600	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.80	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.053	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	1.1	mg/L	0.25	0.050	EPA-353.2	ND	A07	8
Total Phosphate	1.2	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/25/19 09:50	04/03/19 19:38	JRG	PE-OP2	1	B041651
2	EPA-200.7	03/25/19 09:50	04/04/19 13:53	JRG	PE-OP2	1	B041651
3	SM-2320B	03/25/19 06:00	03/25/19 08:43	MEV	MET-1	2	B031876
4	EPA-300.0	03/21/19 21:00	03/22/19 06:07	SAV	IC2	10	B041085
5	SM-2540C	03/26/19 12:00	03/26/19 12:00	CAD	MANUAL	10	B041386
6	EPA-351.2	04/02/19 23:00	04/04/19 14:59	JMH	SC-1	1	B042092
7	EPA-350.1	04/09/19 10:52	04/09/19 15:16	JMH	SC-1	1	B043079
8	EPA-353.2	03/22/19 08:48	03/22/19 09:16	MC1	KONE-1	5	B041289
9	EPA-365.4	04/02/19 23:00	04/05/19 15:14	JMH	SC-1	1	B042093

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 04/17/2019 15:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Manuel and Alda Lawrence Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909044-03	<b>Client Sample Name:</b> Manuel and Alda Lawrence, MAL-MW4, 3/21/2019 1:10:00PM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	47	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	12	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	750	mg/L	0.50	0.051	EPA-200.7	ND		2
Dissolved Potassium	1.3	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	1500	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	180	mg/L	1.0	0.13	EPA-300.0	ND	A07	4
Nitrate as N	40	mg/L	0.20	0.038	EPA-300.0	ND	A07	4
Sulfate	270	mg/L	2.0	0.28	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	2600	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	1.2	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.055	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.059	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	2.0	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/25/19 09:55	04/03/19 19:40	JRG	PE-OP2	1	B041651
2	EPA-200.7	03/25/19 09:55	04/04/19 13:56	JRG	PE-OP2	1	B041651
3	SM-2320B	03/25/19 06:00	03/25/19 08:49	MEV	MET-1	2	B031876
4	EPA-300.0	03/21/19 21:00	03/22/19 07:29	SAV	IC2	2	B041085
5	SM-2540C	03/26/19 12:00	03/26/19 12:00	CAD	MANUAL	10	B041386
6	EPA-351.2	04/02/19 23:00	04/04/19 15:01	JMH	SC-1	1	B042092
7	EPA-350.1	04/09/19 10:52	04/09/19 15:18	JMH	SC-1	1	B043079
8	EPA-353.2	03/22/19 08:48	03/22/19 09:07	MC1	KONE-1	1	B041289
9	EPA-365.4	04/02/19 23:00	04/05/19 15:15	JMH	SC-1	1	B042093

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Woodland, CA 95695

**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909044-04	<b>Client Sample Name:</b> Manuel and Alda Lawrence, MAL-MW5, 3/21/2019 2:35:00PM, Edward Her
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	160	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	50	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	1100	mg/L	0.50	0.051	EPA-200.7	ND		2
Dissolved Potassium	2.3	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	1900	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	420	mg/L	10	1.3	EPA-300.0	ND	A07	4
Nitrate as N	260	mg/L	2.0	0.38	EPA-300.0	ND	A07	4
Sulfate	250	mg/L	20	2.8	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	4600	mg/L	200	100	SM-2540C	ND		5
Total Kjeldahl Nitrogen	2.6	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.12	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	3.3	mg/L	0.25	0.050	EPA-353.2	ND	A07	8
Total Phosphate	1.8	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/25/19 09:55	04/03/19 19:43	JRG	PE-OP2	1	B041651
2	EPA-200.7	03/25/19 09:55	04/04/19 13:59	JRG	PE-OP2	1	B041651
3	SM-2320B	03/25/19 06:00	03/25/19 08:58	MEV	MET-1	2	B031876
4	EPA-300.0	03/21/19 21:00	03/22/19 07:50	SAV	IC2	20	B041085
5	SM-2540C	03/26/19 12:00	03/26/19 12:00	CAD	MANUAL	20	B041386
6	EPA-351.2	04/02/19 23:00	04/04/19 15:03	JMH	SC-1	1	B042092
7	EPA-350.1	04/09/19 10:52	04/09/19 15:18	JMH	SC-1	1	B043079
8	EPA-353.2	03/22/19 08:48	03/22/19 09:20	MC1	KONE-1	5	B041289
9	EPA-365.4	04/02/19 23:00	04/05/19 15:16	JMH	SC-1	1	B042093

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**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909044-05	<b>Client Sample Name:</b> Manuel and Alda Lawrence, MAL-MW6, 3/21/2019 11:15:00AM, Edward Her
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	180	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	65	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	480	mg/L	0.50	0.051	EPA-200.7	ND		2
Dissolved Potassium	2.3	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	870	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	310	mg/L	2.5	0.34	EPA-300.0	ND	A07	4
Nitrate as N	73	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	510	mg/L	5.0	0.70	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	2400	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	1.8	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		7
Nitrite as N	0.26	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	1.7	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/25/19 09:55	04/03/19 19:46	JRG	PE-OP2	1	B041651
2	EPA-200.7	03/25/19 09:55	04/04/19 14:01	JRG	PE-OP2	1	B041651
3	SM-2320B	03/25/19 07:00	03/25/19 09:36	MEV	MET-1	2	B031877
4	EPA-300.0	03/21/19 21:00	03/22/19 08:10	SAV	IC2	5	B041085
5	SM-2540C	03/26/19 12:00	03/26/19 12:00	CAD	MANUAL	10	B041386
6	EPA-351.2	04/02/19 23:00	04/04/19 15:03	JMH	SC-1	1	B042092
7	EPA-350.1	04/09/19 10:52	04/09/19 15:20	JMH	SC-1	1	B043079
8	EPA-353.2	03/22/19 08:48	03/22/19 09:11	MC1	KONE-1	1	B041289
9	EPA-365.4	04/02/19 23:00	04/05/19 15:17	JMH	SC-1	1	B042093

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**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909044-06	<b>Client Sample Name:</b> Manuel and Alda Lawrence, MAL-MW7, 3/21/2019 10:10:00AM, Edward Her
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	210	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	62	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	210	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.0	mg/L	1.0	0.10	EPA-200.7	0.10		2
Bicarbonate Alkalinity as CaCO3	520	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	160	mg/L	2.5	0.34	EPA-300.0	ND	A07	4
Nitrate as N	26	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	550	mg/L	5.0	0.70	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	1.8	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.16	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.11	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	3.7	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/25/19 10:00	04/03/19 20:22	JRG	PE-OP2	1	B041652
2	EPA-200.7	03/25/19 10:00	04/04/19 14:34	JRG	PE-OP2	1	B041652
3	SM-2320B	03/25/19 07:00	03/25/19 09:42	MEV	MET-1	2	B031877
4	EPA-300.0	03/21/19 21:00	03/22/19 11:57	KEB	IC2	5	B041085
5	SM-2540C	03/26/19 12:00	03/26/19 12:00	CAD	MANUAL	10	B041386
6	EPA-351.2	04/02/19 23:00	04/04/19 15:04	JMH	SC-1	1	B042092
7	EPA-350.1	04/09/19 10:52	04/09/19 15:22	JMH	SC-1	1	B043079
8	EPA-353.2	03/22/19 08:48	03/22/19 09:11	MC1	KONE-1	1	B041289
9	EPA-365.4	04/02/19 23:00	04/05/19 15:18	JMH	SC-1	1	B042093

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Reported: 04/17/2019 15:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Manuel and Alda Lawrence Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909044-07	<b>Client Sample Name:</b> Manuel and Alda Lawrence, MAL-MW8, 3/21/2019 12:30:00PM, Edward Her
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	6.7	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	1.9	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	460	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.61	mg/L	1.0	0.10	EPA-200.7	0.10	J	2
Bicarbonate Alkalinity as CaCO3	660	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	58	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	98	mg/L	2.5	0.34	EPA-300.0	ND	A07	4
Nitrate as N	75	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	100	mg/L	5.0	0.70	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	1.5	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.059	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.75	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	4.4	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/25/19 10:05	04/03/19 20:24	JRG	PE-OP2	1	B041652
2	EPA-200.7	03/25/19 10:05	04/04/19 14:31	JRG	PE-OP2	1	B041652
3	SM-2320B	03/25/19 07:00	03/25/19 09:48	MEV	MET-1	2	B031877
4	EPA-300.0	03/21/19 21:00	03/22/19 09:33	SAV	IC2	5	B041085
5	SM-2540C	03/26/19 12:00	03/26/19 12:00	CAD	MANUAL	10	B041386
6	EPA-351.2	04/02/19 23:00	04/04/19 15:05	JMH	SC-1	1	B042092
7	EPA-350.1	04/09/19 10:52	04/09/19 15:23	JMH	SC-1	1	B043079
8	EPA-353.2	03/22/19 08:48	03/22/19 09:11	MC1	KONE-1	1	B041289
9	EPA-365.4	04/02/19 23:00	04/05/19 15:18	JMH	SC-1	1	B042093

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Reported: 04/17/2019 15:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Manuel and Alda Lawrence Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1909044-08	<b>Client Sample Name:</b> Manuel and Alda Lawrence, Field Duplicate, 3/21/2019 12:00:00PM, Edward Her
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	3.3	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	0.95	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	450	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.57	mg/L	1.0	0.10	EPA-200.7	0.10	J	2
Bicarbonate Alkalinity as CaCO3	660	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	58	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	97	mg/L	2.5	0.34	EPA-300.0	ND	A07	4
Nitrate as N	76	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	100	mg/L	5.0	0.70	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.89	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.081	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.78	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	4.9	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/25/19 10:10	04/03/19 20:27	JRG	PE-OP2	1	B041652
2	EPA-200.7	03/25/19 10:10	04/04/19 14:43	JRG	PE-OP2	1	B041652
3	SM-2320B	03/25/19 07:00	03/25/19 09:55	MEV	MET-1	2	B031877
4	EPA-300.0	03/21/19 21:00	03/22/19 09:53	SAV	IC2	5	B041085
5	SM-2540C	03/26/19 12:00	03/26/19 12:00	CAD	MANUAL	10	B041386
6	EPA-351.2	04/02/19 23:00	04/04/19 15:06	JMH	SC-1	1	B042092
7	EPA-350.1	04/09/19 10:52	04/09/19 15:24	JMH	SC-1	1	B043079
8	EPA-353.2	03/22/19 08:48	03/22/19 09:11	MC1	KONE-1	1	B041289
9	EPA-365.4	04/02/19 23:00	04/05/19 15:19	JMH	SC-1	1	B042093

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**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031876</b>						
Bicarbonate Alkalinity as CaCO3	B031876-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031876-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031876-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031877</b>						
Bicarbonate Alkalinity as CaCO3	B031877-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031877-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031877-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B041085</b>						
Chloride	B041085-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B041085-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B041085-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B041289</b>						
Nitrite as N	B041289-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B041386</b>						
Total Dissolved Solids @ 180 C	B041386-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B041651</b>						
Dissolved Calcium	B041651-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B041651-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B041651-BLK2	ND	mg/L	0.50	0.051	
Dissolved Potassium	B041651-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B041652</b>						
Dissolved Calcium	B041652-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B041652-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B041652-BLK1	ND	mg/L	0.50	0.051	
<b>Dissolved Potassium</b>	<b>B041652-BLK2</b>	<b>0.10265</b>	<b>mg/L</b>	<b>1.0</b>	<b>0.10</b>	<b>J</b>
<b>QC Batch ID: B042092</b>						
Total Kjeldahl Nitrogen	B042092-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B042093</b>						
Total Phosphate	B042093-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B043079</b>						

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**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B043079</b>						
Ammonia as N	B043079-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B041085</b>										
Chloride	B041085-BS1	LCS	51.195	50.000	mg/L	102		90 - 110		
Nitrate as N	B041085-BS1	LCS	5.1500	5.0000	mg/L	103		90 - 110		
Sulfate	B041085-BS1	LCS	103.16	100.00	mg/L	103		90 - 110		
<b>QC Batch ID: B041289</b>										
Nitrite as N	B041289-BS1	LCS	0.52890	0.50000	mg/L	106		90 - 110		
<b>QC Batch ID: B041386</b>										
Total Dissolved Solids @ 180 C	B041386-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B041651</b>										
Dissolved Calcium	B041651-BS1	LCS	9.6654	10.000	mg/L	96.7		85 - 115		
Dissolved Magnesium	B041651-BS1	LCS	9.5779	10.000	mg/L	95.8		85 - 115		
Dissolved Sodium	B041651-BS2	LCS	8.9541	10.000	mg/L	89.5		85 - 115		
Dissolved Potassium	B041651-BS1	LCS	8.5532	10.000	mg/L	85.5		85 - 115		
<b>QC Batch ID: B041652</b>										
Dissolved Calcium	B041652-BS1	LCS	9.6479	10.000	mg/L	96.5		85 - 115		
Dissolved Magnesium	B041652-BS1	LCS	9.7905	10.000	mg/L	97.9		85 - 115		
Dissolved Sodium	B041652-BS1	LCS	8.6350	10.000	mg/L	86.4		85 - 115		
Dissolved Potassium	B041652-BS2	LCS	8.9800	10.000	mg/L	89.8		85 - 115		
<b>QC Batch ID: B042092</b>										
Total Kjeldahl Nitrogen	B042092-BS1	LCS	2.0192	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B042093</b>										
Total Phosphate	B042093-BS1	LCS	2.9672	3.0660	mg/L	96.8		85 - 115		
<b>QC Batch ID: B043079</b>										
Ammonia as N	B043079-BS1	LCS	0.92620	1.0000	mg/L	92.6		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 04/17/2019 15:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Manuel and Alda Lawrence Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B031876</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1908994-01	43.660	43.660		mg/L	0		10	
Carbonate Alkalinity as CaCO3	DUP	1908994-01	31.340	29.210		mg/L	7.0		10	
Hydroxide Alkalinity as CaCO3	DUP	1908994-01	ND	ND		mg/L			10	
<b>QC Batch ID: B031877</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1909060-02	140.42	138.14		mg/L	1.6		10	
Carbonate Alkalinity as CaCO3	DUP	1909060-02	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1909060-02	ND	ND		mg/L			10	
<b>QC Batch ID: B041085</b>		Used client sample: Y - Description: MAL-MW2, 03/21/2019 14:00								
Chloride	DUP	1909044-02	242.24	240.86		mg/L	0.6		10	
	MS	1909044-02	242.24	845.90	505.05	mg/L		120		80 - 120
	MSD	1909044-02	242.24	846.14	505.05	mg/L	0.0	120	10	80 - 120
Nitrate as N	DUP	1909044-02	156.95	156.62		mg/L	0.2		10	
	MS	1909044-02	156.95	209.56	50.505	mg/L		104		80 - 120
	MSD	1909044-02	156.95	210.10	50.505	mg/L	0.3	105	10	80 - 120
Sulfate	DUP	1909044-02	253.63	253.30		mg/L	0.1		10	
	MS	1909044-02	253.63	1427.6	1010.1	mg/L		116		80 - 120
	MSD	1909044-02	253.63	1434.6	1010.1	mg/L	0.5	117	10	80 - 120
<b>QC Batch ID: B041289</b>		Used client sample: Y - Description: MAL-MW1, 03/21/2019 14:55								
Nitrite as N	DUP	1909044-01	0.017344	0.011377		mg/L	41.6		10	J,A02
	MS	1909044-01	0.017344	0.57784	0.52632	mg/L		106		90 - 110
	MSD	1909044-01	0.017344	0.56820	0.52632	mg/L	1.7	105	10	90 - 110
<b>QC Batch ID: B041386</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1909044-01	2100.0	2130.0		mg/L	1.4		10	
<b>QC Batch ID: B041651</b>		Used client sample: Y - Description: MAL-MW1, 03/21/2019 14:55								
Dissolved Calcium	DUP	1909044-01	30.453	31.076		mg/L	2.0		20	
	MS	1909044-01	30.453	40.883	10.204	mg/L		102		85 - 115
	MSD	1909044-01	30.453	40.711	10.204	mg/L	0.4	101	20	85 - 115
Dissolved Magnesium	DUP	1909044-01	8.3179	8.5281		mg/L	2.5		20	
	MS	1909044-01	8.3179	18.221	10.204	mg/L		97.0		85 - 115
	MSD	1909044-01	8.3179	18.212	10.204	mg/L	0.0	97.0	20	85 - 115
Dissolved Sodium	DUP	1909044-01	581.20	570.29		mg/L	1.9		20	
	MS	1909044-01	581.20	573.20	10.204	mg/L		-78.4		85 - 115 A03
	MSD	1909044-01	581.20	563.53	10.204	mg/L	1.7	-173	20	85 - 115 A03
Dissolved Potassium	DUP	1909044-01	0.89863	0.86924		mg/L	3.3		20	J
	MS	1909044-01	0.89863	11.720	10.204	mg/L		106		85 - 115
	MSD	1909044-01	0.89863	11.831	10.204	mg/L	0.9	107	20	85 - 115

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B041652</b>		Used client sample: N								
Dissolved Calcium	DUP	1909049-01	89.646	90.215		mg/L	0.6		20	
	MS	1909049-01	89.646	97.434	10.204	mg/L		76.3		A03
	MSD	1909049-01	89.646	98.355	10.204	mg/L	0.9	85.3	20	85 - 115
Dissolved Magnesium	DUP	1909049-01	36.957	37.052		mg/L	0.3		20	
	MS	1909049-01	36.957	46.787	10.204	mg/L		96.3		85 - 115
	MSD	1909049-01	36.957	47.041	10.204	mg/L	0.5	98.8	20	85 - 115
Dissolved Sodium	DUP	1909049-01	106.27	107.02		mg/L	0.7		20	
	MS	1909049-01	106.27	114.65	10.204	mg/L		82.1		A03
	MSD	1909049-01	106.27	115.85	10.204	mg/L	1.0	93.9	20	85 - 115
Dissolved Potassium	DUP	1909049-01	4.9846	4.9313		mg/L	1.1		20	
	MS	1909049-01	4.9846	15.301	10.204	mg/L		101		85 - 115
	MSD	1909049-01	4.9846	15.205	10.204	mg/L	0.6	100	20	85 - 115
<b>QC Batch ID: B042092</b>		Used client sample: Y - Description: MAL-MW1, 03/21/2019 14:55								
Total Kjeldahl Nitrogen	DUP	1909044-01	0.60140	0.59220		mg/L	1.5		20	
	MS	1909044-01	0.60140	2.6675	2.0000	mg/L		103		90 - 110
	MSD	1909044-01	0.60140	2.6215	2.0000	mg/L	1.7	101	20	90 - 110
<b>QC Batch ID: B042093</b>		Used client sample: Y - Description: MAL-MW1, 03/21/2019 14:55								
Total Phosphate	DUP	1909044-01	3.5372	3.4893		mg/L	1.4		20	
	MS	1909044-01	3.5372	6.5408	3.0660	mg/L		98.0		80 - 120
	MSD	1909044-01	3.5372	6.2587	3.0660	mg/L	4.4	88.8	20	80 - 120
<b>QC Batch ID: B043079</b>		Used client sample: Y - Description: MAL-MW1, 03/21/2019 14:55								
Ammonia as N	DUP	1909044-01	0.058800	0.053100		mg/L	10.2		10	J,A02
	MS	1909044-01	0.058800	1.1124	1.1111	mg/L		94.8		90 - 110
	MSD	1909044-01	0.058800	1.0966	1.1111	mg/L	1.4	93.4	10	90 - 110

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500 First Street  
Woodland, CA 95695

**Reported:** 04/17/2019 15:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 03/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Maple Avenue Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905554

Invoice ID: B333336

Enclosed are the results of analyses for samples received by the laboratory on 2/20/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905554

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



19-05554

BC Laboratories, Inc.

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

Chain of Custody

Report to:

Expanded Constituent Suite  
Project: Dairy Representative Monitoring Program  
Site: Maple Avenue Dairy  
Sample Name: *Maple Avenue - Spore Key*  
Global ID: WDP100036510

Analysis Requested

From Unfiltered Sample:  
Total Kjeldahl Nitrogen,  
Total Phosphate (as PO4),  
Alkalinity (HCO3, CO3 & OH) as  
CaCO3

From Filtered Sample:  
Na, K, Mg, Ca, Cl,  
SO4 (as SO4),  
Total Dissolved Solids

From Filtered Sample:  
Ammonia-N, NO3-N,  
NO2-N

Q1 P6  
Unpreserved

Matrix

Date Sampled

Time Sampled

Strike out non-sampled wells

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1 P6 Unpreserved
1	MAP-MW8				x
2	MAP-MW9				x
3	MAP-MW10	2/20/19	1300	cbn	x
4	Field Duplicates				x
5					
6					
7					
8					
9					
10					

SHOBT HOLDING TIME  
Cr6 NO2 (NO3) CJP SS  
DO O2 BOD MBAS COI

CHIK BY  
DISTRIBUTION  
SUB-OUT

Comments:  
1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
3) Send lab reports to Luthdorff and Scalmanini/ Scalmanini/ Consulting Engineers via email: llavagnino@lsce.com, rtryson@lsce.com, pthallwa@lsce.com, jlovelis@lsce.com  
4) Send invoices to Jeanette Lovelis (jlovelis@lsce.com).

Relinquished by: (Signature)  
Relinquished by: (Signature)  
Relinquished by: (Signature)

Received By: [Signature] Date & Time: 2/20/19 20:45  
Received By: [Signature] Date & Time: 2/20/19 22:30  
Received By: [Signature] Date & Time:

(A)= Analysis (C)= Container (P)= Preservative



BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-05554

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.98 Container: YE Thermometer ID: 708 Date/Time 2/20 2230  
 Temperature: (A) 30 °C (IC) 3.3 °C Analyst Init EML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	AS									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	C									
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8050										
QT EPA 515.1/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: EML Date/Time: 2/20/19 2257 Rev 21 05/23/2016  
 A = Actual / C = Corrected

ISS:WP:Doc/Word/Perfect/LAB\_DOCS/FORMS/SAMREC Rev 201



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Maple Avenue Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905554-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Maple Avenue Dairy	<b>Sampling Date:</b>	02/20/2019 13:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAP-MW10	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	wesley Sherman-Shochley of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/12/2019 13:53  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Maple Avenue Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905554-01	Client Sample Name:	Maple Avenue Dairy, MAP-MW10, 2/20/2019 1:00:00PM, wesley Sherman-Shochley					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	94	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	6.0	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	86	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.4	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	170	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	37	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	42	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	98	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	670	mg/L	33	17	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.75	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.084	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	0.25	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:35	02/28/19 17:25	JRG	PE-OP2	1	B038592
2	SM-2320B	02/22/19 12:00	02/22/19 16:27	MEV	MET-1	1	B031729
3	EPA-300.0	02/21/19 13:00	02/21/19 19:54	EMM	IC2	2	B038229
4	EPA-300.0	02/21/19 13:00	02/21/19 14:45	SAV	IC2	5	B038229
5	SM-2540C	02/25/19 13:00	02/25/19 13:00	CAD	MANUAL	3.333	B038491
6	EPA-351.2	03/03/19 10:00	03/11/19 08:24	JMH	SC-1	1	B039138
7	EPA-350.1	03/08/19 11:30	03/12/19 08:07	JMH	SC-1	1	B039666
8	EPA-353.2	02/21/19 11:29	02/21/19 11:29	MC1	KONE-1	1	B038508
9	EPA-365.4	03/03/19 10:00	03/11/19 10:52	JMH	SC-1	1	B039139

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Woodland, CA 95695

**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Maple Avenue Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031729</b>						
Bicarbonate Alkalinity as CaCO3	B031729-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031729-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031729-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038229</b>						
Chloride	B038229-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038229-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038229-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038491</b>						
Total Dissolved Solids @ 180 C	B038491-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038508</b>						
Nitrite as N	B038508-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038592</b>						
Dissolved Calcium	B038592-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038592-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038592-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038592-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039138</b>						
Total Kjeldahl Nitrogen	B039138-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039139</b>						
Total Phosphate	B039139-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039666</b>						
Ammonia as N	B039666-BLK1	ND	mg/L	0.20	0.050	

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Woodland, CA 95695

**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Maple Avenue Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038229</b>										
Chloride	B038229-BS1	LCS	53.315	50.000	mg/L	107		90 - 110		
Nitrate as N	B038229-BS1	LCS	5.1860	5.0000	mg/L	104		90 - 110		
Sulfate	B038229-BS1	LCS	105.10	100.00	mg/L	105		90 - 110		
<b>QC Batch ID: B038491</b>										
Total Dissolved Solids @ 180 C	B038491-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B038508</b>										
Nitrite as N	B038508-BS1	LCS	0.50553	0.50000	mg/L	101		90 - 110		
<b>QC Batch ID: B038592</b>										
Dissolved Calcium	B038592-BS1	LCS	9.7714	10.000	mg/L	97.7		85 - 115		
Dissolved Magnesium	B038592-BS1	LCS	9.3331	10.000	mg/L	93.3		85 - 115		
Dissolved Sodium	B038592-BS1	LCS	8.8367	10.000	mg/L	88.4		85 - 115		
Dissolved Potassium	B038592-BS1	LCS	9.1714	10.000	mg/L	91.7		85 - 115		
<b>QC Batch ID: B039138</b>										
Total Kjeldahl Nitrogen	B039138-BS1	LCS	2.0136	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B039139</b>										
Total Phosphate	B039139-BS1	LCS	3.1202	3.0660	mg/L	102		85 - 115		
<b>QC Batch ID: B039666</b>										
Ammonia as N	B039666-BS1	LCS	0.97340	1.0000	mg/L	97.3		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/12/2019 13:53  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Maple Avenue Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B031729</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1905552-01	397.98	392.81		mg/L	1.3		10	
Carbonate Alkalinity as CaCO3	DUP	1905552-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1905552-01	ND	ND		mg/L			10	
<b>QC Batch ID: B038229</b>		Used client sample: Y - Description: MAP-MW10, 02/20/2019 13:00								
Chloride	DUP	1905554-01	32.790	32.590		mg/L	0.6		10	
	MS	1905554-01	32.790	314.98	252.53	mg/L		112		80 - 120
	MSD	1905554-01	32.790	314.73	252.53	mg/L	0.1	112	10	80 - 120
Nitrate as N	DUP	1905554-01	41.850	42.015		mg/L	0.4		10	
	MS	1905554-01	41.850	68.995	25.253	mg/L		107		80 - 120
	MSD	1905554-01	41.850	69.338	25.253	mg/L	0.5	109	10	80 - 120
Sulfate	DUP	1905554-01	90.940	89.485		mg/L	1.6		10	
	MS	1905554-01	90.940	648.27	505.05	mg/L		110		80 - 120
	MSD	1905554-01	90.940	649.13	505.05	mg/L	0.1	111	10	80 - 120
<b>QC Batch ID: B038491</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1905553-01	603.33	613.33		mg/L	1.6		10	
<b>QC Batch ID: B038508</b>		Used client sample: N								
Nitrite as N	DUP	1905550-01	ND	ND		mg/L			10	
	MS	1905550-01	ND	0.57758	0.52632	mg/L		110		90 - 110
	MSD	1905550-01	ND	0.56520	0.52632	mg/L	2.2	107	10	90 - 110
<b>QC Batch ID: B038592</b>		Used client sample: N								
Dissolved Calcium	DUP	1905550-01	91.946	92.244		mg/L	0.3		20	
	MS	1905550-01	91.946	103.07	10.204	mg/L		109		85 - 115
	MSD	1905550-01	91.946	103.37	10.204	mg/L	0.3	112	20	85 - 115
Dissolved Magnesium	DUP	1905550-01	24.995	25.086		mg/L	0.4		20	
	MS	1905550-01	24.995	34.844	10.204	mg/L		96.5		85 - 115
	MSD	1905550-01	24.995	35.197	10.204	mg/L	1.0	100	20	85 - 115
Dissolved Sodium	DUP	1905550-01	58.104	58.169		mg/L	0.1		20	
	MS	1905550-01	58.104	69.564	10.204	mg/L		112		85 - 115
	MSD	1905550-01	58.104	69.310	10.204	mg/L	0.4	110	20	85 - 115
Dissolved Potassium	DUP	1905550-01	3.0792	3.0358		mg/L	1.4		20	
	MS	1905550-01	3.0792	12.912	10.204	mg/L		96.4		85 - 115
	MSD	1905550-01	3.0792	13.122	10.204	mg/L	1.6	98.4	20	85 - 115
<b>QC Batch ID: B039138</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1905552-01	0.41640	0.39260		mg/L	5.9		20	
	MS	1905552-01	0.41640	1.6717	2.0000	mg/L		62.8		90 - 110 Q03
	MSD	1905552-01	0.41640	1.3754	2.0000	mg/L	19.4	48.0	20	90 - 110 Q03

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500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Maple Avenue Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B039139</b>		Used client sample: N								
Total Phosphate	DUP	1905552-01	0.94286	0.96831		mg/L	2.7		20	
	MS	1905552-01	0.94286	4.0685	3.0660	mg/L		102	80 - 120	
	MSD	1905552-01	0.94286	4.0796	3.0660	mg/L	0.3	102	20	80 - 120
<b>QC Batch ID: B039666</b>		Used client sample: N								
Ammonia as N	DUP	1905552-01	0.12460	0.11200		mg/L	10.7		10	J,A02
	MS	1905552-01	0.12460	1.1937	1.1111	mg/L		96.2	90 - 110	
	MSD	1905552-01	0.12460	1.2296	1.1111	mg/L	3.0	99.4	10	90 - 110

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500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Maple Avenue Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 05/10/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Richmar Farms Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1912624  
Invoice ID: B339530

Enclosed are the results of analyses for samples received by the laboratory on 4/19/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000884907

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1912624

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



19-12624

BC Laboratories, Inc.				Chain of Custody			
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911				4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911			
Report to:				Analysis Requested			
Expanded Constituent Suite				From Filtered Sample:			
Project: Dairy Representative Monitoring Program				Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids			
Site: Richmar Farms Dairy				From Unfiltered Sample:			
Samplers Name: <i>Wesley Jerome Sordley</i>				Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3			
Global ID - WDR100038761							
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ch Fe Unpreserved	From Filtered Sample:	From Unfiltered Sample:
- 1	(RIC-MW1) RIC-MW2	4/18/19	1320	WG	x	x	x
- 2	RIC-MW3 RIC-MW4	4/18/19	1335	WG	x	x	x
- 3	RIC-MW5, RIC-MW6	4/18/19	1355	WG	x	x	x
- 4	RIC-MW7s, RIC-MW7d	4/18/19	1345	WG	x	x	x
- 5	RIC-MW8s, RIC-MW8d	4/18/19	1405	WG	x	x	x
- 6	RIC-MW9s, RIC-MW9d	4/18/19	1425	WG	x	x	x
- 7	Field Duplicate	4/18/19	1400	WG	x	x	x
8							
9							
10							
11							
12							
13							

  

CHK BY: <i>MM</i>	DISTRIBUTION	SHORT HOLDING TIME
<input checked="" type="checkbox"/> C+	<input checked="" type="checkbox"/> NO <sub>3</sub>	<input checked="" type="checkbox"/> OP
<input checked="" type="checkbox"/> DO	<input checked="" type="checkbox"/> BOD	<input checked="" type="checkbox"/> MBAS
<input checked="" type="checkbox"/> SUB OUT	<input checked="" type="checkbox"/> COT	

  

Relinquished by: (Signature) <i>[Signature]</i>	Date & Time
Relinquished by: (Signature) <i>[Signature]</i>	Date & Time 4/18/19 20:40
Relinquished by: (Signature) <i>[Signature]</i>	Date & Time 4/18/19 22:15
Relinquished by: (Signature)	Date & Time

Comments:

- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Lunderoff and Scalmani Consulting Engineers via email: [lscalmani@lscce.com](mailto:lscalmani@lscce.com), [rolyson@lscce.com](mailto:rolyson@lscce.com), [pohalwal@lscce.com](mailto:pohalwal@lscce.com), [jlovelis@lscce.com](mailto:jlovelis@lscce.com)
- Send invoices to Jeanette Lovelis ([jlovelis@lscce.com](mailto:jlovelis@lscce.com)).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page      Of     

Submission #: 19-12624

SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
--	--	--	--	--

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.98 Container: PE Thermometer ID: 108 Date/Time: 4/18/2015  
 Temperature: (A) 1.8 °C / (C) 1.7 °C Analyst Init: ER

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	AB	AB	AB	AB	AB	AB	AB			
4oz / 8oz / 16oz PE UNPRES										
3oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	C	C	C	C	C	C	C			
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/605/8050										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 543										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: \_\_\_\_\_ Date/Time: 4/18/15 0922 Rev 21 05/23/2016  
 A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1912624-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/19/2019 22:15
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	04/18/2019 13:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1912624-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/19/2019 22:15
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	04/18/2019 12:25
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1912624-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/19/2019 22:15
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	04/18/2019 12:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW5	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1912624-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/19/2019 22:15
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	04/18/2019 13:45
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1912624-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/19/2019 22:15
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	04/18/2019 14:05
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW8s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1912624-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/19/2019 22:15
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	04/18/2019 14:25
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW9s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1912624-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/19/2019 22:15
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	04/18/2019 12:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

Reported: 05/10/2019 13:26  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Richmar Farms Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1912624-01	Client Sample Name:	Richmar Farms, RIC-MW1, 4/18/2019 1:20:00PM, Wesley Sherman-Shochley					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	75	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	12	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	260	mg/L	0.50	0.051	EPA-200.7	0.060		1
Dissolved Potassium	2.9	mg/L	1.0	0.10	EPA-200.7	0.10		1
Bicarbonate Alkalinity as CaCO3	400	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	140	mg/L	0.50	0.15	EPA-300.0	0.26		3
Nitrate as N	ND	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	260	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.25	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.20	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.66	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/19 11:09	04/25/19 18:54	JRG	PE-OP2	1	B044664
2	SM-2320B	04/22/19 13:00	04/22/19 17:18	MEV	MET-1	2	B042205
3	EPA-300.0	04/19/19 09:00	04/19/19 21:00	KEB	IC5	1	B044136
4	SM-2540C	04/24/19 15:00	04/24/19 15:00	CAD	MANUAL	5	B044438
5	EPA-351.2	05/02/19 23:00	05/03/19 14:23	JMH	SC-1	1	B045265
6	EPA-350.1	05/07/19 12:20	05/07/19 15:17	JMH	SC-1	1	B045560
7	EPA-353.2	04/19/19 11:53	04/19/19 11:53	MC1	KONE-1	1	B044248
8	EPA-365.4	05/02/19 23:00	05/03/19 12:46	JMH	SC-1	1	B045266

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 05/10/2019 13:26  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Richmar Farms Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1912624-02	<b>Client Sample Name:</b> Richmar Farms, RIC-MW3, 4/18/2019 12:25:00PM, Wesley Sherman-Shochley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	170	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	29	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	250	mg/L	0.50	0.051	EPA-200.7	0.060		1
Dissolved Potassium	3.7	mg/L	1.0	0.10	EPA-200.7	0.10		1
Bicarbonate Alkalinity as CaCO3	800	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	150	mg/L	0.50	0.15	EPA-300.0	0.26		3
Nitrate as N	2.9	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	140	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.71	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.20	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.074	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	35	mg/L	3.0	1.0	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/19 11:15	04/25/19 19:23	JRG	PE-OP2	1	B044664
2	SM-2320B	04/22/19 13:00	04/22/19 17:29	MEV	MET-1	2	B042205
3	EPA-300.0	04/19/19 09:00	04/19/19 21:18	KEB	IC5	1	B044136
4	SM-2540C	04/24/19 15:00	04/24/19 15:00	CAD	MANUAL	5	B044438
5	EPA-351.2	05/02/19 23:00	05/03/19 14:10	JMH	SC-1	1	B045265
6	EPA-350.1	05/07/19 12:20	05/07/19 15:18	JMH	SC-1	1	B045560
7	EPA-353.2	04/19/19 11:53	04/19/19 11:53	MC1	KONE-1	1	B044248
8	EPA-365.4	05/02/19 23:00	05/03/19 13:12	JMH	SC-1	20	B045266

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500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1912624-03	<b>Client Sample Name:</b> Richmar Farms, RIC-MW5, 4/18/2019 12:55:00PM, Wesley Sherman-Shochley
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	35	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	4.6	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	45	mg/L	0.50	0.051	EPA-200.7	0.060		1
Dissolved Potassium	1.8	mg/L	1.0	0.10	EPA-200.7	0.10		1
Bicarbonate Alkalinity as CaCO3	150	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	17	mg/L	0.50	0.15	EPA-300.0	0.26		3
Nitrate as N	2.2	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	32	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	290	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.29	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.062	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.046	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	3.2	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/19 11:17	04/25/19 19:25	JRG	PE-OP2	1	B044664
2	SM-2320B	04/22/19 13:00	04/22/19 17:35	MEV	MET-1	1	B042205
3	EPA-300.0	04/19/19 09:00	04/19/19 15:02	KEB	IC5	1	B044136
4	SM-2540C	04/24/19 15:00	04/24/19 15:00	CAD	MANUAL	2	B044438
5	EPA-351.2	05/02/19 23:00	05/03/19 14:12	JMH	SC-1	1	B045265
6	EPA-350.1	05/07/19 12:20	05/07/19 15:19	JMH	SC-1	1	B045560
7	EPA-353.2	04/19/19 11:53	04/19/19 11:53	MC1	KONE-1	1	B044248
8	EPA-365.4	05/02/19 23:00	05/03/19 12:49	JMH	SC-1	1	B045266

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Reported: 05/10/2019 13:26  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Richmar Farms Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1912624-04	<b>Client Sample Name:</b> Richmar Farms, RIC-MW7s, 4/18/2019 1:45:00PM, Wesley Sherman-Shochley
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	49	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	9.4	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	290	mg/L	0.50	0.051	EPA-200.7	0.060		1
Dissolved Potassium	2.6	mg/L	1.0	0.10	EPA-200.7	0.10		1
Bicarbonate Alkalinity as CaCO3	400	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	0.50	0.15	EPA-300.0	0.26		3
Nitrate as N	ND	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	310	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.058	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.013	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.90	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/19 11:20	04/25/19 19:28	JRG	PE-OP2	1	B044664
2	SM-2320B	04/22/19 13:00	04/22/19 17:42	MEV	MET-1	2	B042205
3	EPA-300.0	04/19/19 09:00	04/19/19 21:36	KEB	IC5	1	B044136
4	SM-2540C	04/24/19 15:00	04/24/19 15:00	CAD	MANUAL	5	B044438
5	EPA-351.2	05/02/19 23:00	05/03/19 14:14	JMH	SC-1	1	B045265
6	EPA-350.1	05/07/19 12:20	05/07/19 15:20	JMH	SC-1	1	B045560
7	EPA-353.2	04/19/19 11:53	04/19/19 11:53	MC1	KONE-1	1	B044248
8	EPA-365.4	05/02/19 23:00	05/03/19 12:50	JMH	SC-1	1	B045266

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Reported: 05/10/2019 13:26  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Richmar Farms Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1912624-05	<b>Client Sample Name:</b> Richmar Farms, RIC-MW8s, 4/18/2019 2:05:00PM, Wesley Sherman-Shochley
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	39	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	10	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	180	mg/L	0.50	0.051	EPA-200.7	0.060		1
Dissolved Potassium	3.0	mg/L	1.0	0.10	EPA-200.7	0.10		1
Bicarbonate Alkalinity as CaCO3	310	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	69	mg/L	0.50	0.15	EPA-300.0	0.26		3
Nitrate as N	ND	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	150	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	700	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.083	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.34	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/19 11:23	04/25/19 19:31	JRG	PE-OP2	1	B044664
2	SM-2320B	04/22/19 13:00	04/22/19 17:49	MEV	MET-1	2	B042205
3	EPA-300.0	04/19/19 09:00	04/19/19 15:38	KEB	IC5	1	B044136
4	SM-2540C	04/24/19 15:00	04/24/19 15:00	CAD	MANUAL	3.333	B044438
5	EPA-351.2	05/02/19 23:00	05/03/19 14:15	JMH	SC-1	1	B045265
6	EPA-350.1	05/07/19 12:20	05/07/19 15:20	JMH	SC-1	1	B045560
7	EPA-353.2	04/19/19 11:53	04/19/19 11:53	MC1	KONE-1	1	B044248
8	EPA-365.4	05/02/19 23:00	05/03/19 12:50	JMH	SC-1	1	B045266

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Reported: 05/10/2019 13:26  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Richmar Farms Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1912624-06	<b>Client Sample Name:</b> Richmar Farms, RIC-MW9s, 4/18/2019 2:25:00PM, Wesley Sherman-Shochley
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	110	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	59	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	110	mg/L	0.50	0.051	EPA-200.7	0.060		1
Dissolved Potassium	1.9	mg/L	1.0	0.10	EPA-200.7	0.10		1
Bicarbonate Alkalinity as CaCO3	390	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	89	mg/L	2.5	0.75	EPA-300.0	1.3	A07	3
Nitrate as N	48	mg/L	0.50	0.21	EPA-300.0	ND	A07	3
Sulfate	75	mg/L	5.0	1.0	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	940	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.40	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.93	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.42	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/19 11:30	04/25/19 19:33	JRG	PE-OP2	1	B044664
2	SM-2320B	04/22/19 13:00	04/22/19 17:54	MEV	MET-1	2	B042205
3	EPA-300.0	04/19/19 09:00	04/19/19 15:56	KEB	IC5	5	B044136
4	SM-2540C	04/24/19 15:00	04/24/19 15:00	CAD	MANUAL	5	B044438
5	EPA-351.2	05/02/19 23:00	05/03/19 14:16	JMH	SC-1	1	B045265
6	EPA-350.1	05/07/19 12:20	05/07/19 16:20	JMH	SC-1	1	B045561
7	EPA-353.2	04/19/19 11:53	04/19/19 12:14	MC1	KONE-1	1	B044248
8	EPA-365.4	05/02/19 23:00	05/03/19 12:52	JMH	SC-1	1	B045266

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Reported: 05/10/2019 13:26  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Richmar Farms Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1912624-07	<b>Client Sample Name:</b> Richmar Farms, Field Duplicate, 4/18/2019 12:00:00PM, Wesley Sherman-Shochley
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	110	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	59	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	110	mg/L	0.50	0.051	EPA-200.7	0.060		1
Dissolved Potassium	1.8	mg/L	1.0	0.10	EPA-200.7	0.10		1
Bicarbonate Alkalinity as CaCO3	390	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	89	mg/L	2.5	0.75	EPA-300.0	1.3	A07	3
Nitrate as N	48	mg/L	0.50	0.21	EPA-300.0	ND	A07	3
Sulfate	74	mg/L	5.0	1.0	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	930	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.44	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.97	mg/L	0.25	0.050	EPA-353.2	ND	A07	7
Total Phosphate	0.36	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/19 11:35	04/25/19 19:36	JRG	PE-OP2	1	B044664
2	SM-2320B	04/22/19 13:00	04/22/19 18:00	MEV	MET-1	2	B042205
3	EPA-300.0	04/19/19 09:00	04/19/19 16:13	KEB	IC5	5	B044136
4	SM-2540C	04/24/19 15:00	04/24/19 15:00	CAD	MANUAL	5	B044438
5	EPA-351.2	05/02/19 23:00	05/03/19 14:17	JMH	SC-1	1	B045265
6	EPA-350.1	05/07/19 12:20	05/07/19 16:25	JMH	SC-1	1	B045561
7	EPA-353.2	04/19/19 11:53	04/19/19 12:04	MC1	KONE-1	5	B044248
8	EPA-365.4	05/02/19 23:00	05/03/19 12:53	JMH	SC-1	1	B045266

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**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B042205</b>						
Bicarbonate Alkalinity as CaCO3	B042205-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B042205-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B042205-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B044136</b>						
Chloride	B044136-BLK1	0.26300	mg/L	0.50	0.15	J
Nitrate as N	B044136-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B044136-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B044248</b>						
Nitrite as N	B044248-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B044438</b>						
Total Dissolved Solids @ 180 C	B044438-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B044664</b>						
Dissolved Calcium	B044664-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B044664-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B044664-BLK1	0.060192	mg/L	0.50	0.051	J
Dissolved Potassium	B044664-BLK1	0.10027	mg/L	1.0	0.10	J
<b>QC Batch ID: B045265</b>						
Total Kjeldahl Nitrogen	B045265-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B045266</b>						
Total Phosphate	B045266-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B045560</b>						
Ammonia as N	B045560-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B045561</b>						
Ammonia as N	B045561-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B044136</b>										
Chloride	B044136-BS1	LCS	52.430	50.000	mg/L	105		90 - 110		
Nitrate as N	B044136-BS1	LCS	5.3090	5.0000	mg/L	106		90 - 110		
Sulfate	B044136-BS1	LCS	104.09	100.00	mg/L	104		90 - 110		
<b>QC Batch ID: B044248</b>										
Nitrite as N	B044248-BS1	LCS	0.52650	0.50000	mg/L	105		90 - 110		
<b>QC Batch ID: B044438</b>										
Total Dissolved Solids @ 180 C	B044438-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B044664</b>										
Dissolved Calcium	B044664-BS1	LCS	10.139	10.000	mg/L	101		85 - 115		
Dissolved Magnesium	B044664-BS1	LCS	10.100	10.000	mg/L	101		85 - 115		
Dissolved Sodium	B044664-BS1	LCS	9.3074	10.000	mg/L	93.1		85 - 115		
Dissolved Potassium	B044664-BS1	LCS	8.9814	10.000	mg/L	89.8		85 - 115		
<b>QC Batch ID: B045265</b>										
Total Kjeldahl Nitrogen	B045265-BS1	LCS	1.9369	2.0000	mg/L	96.8		90 - 110		
<b>QC Batch ID: B045266</b>										
Total Phosphate	B045266-BS1	LCS	3.2971	3.0660	mg/L	108		85 - 115		
<b>QC Batch ID: B045560</b>										
Ammonia as N	B045560-BS1	LCS	0.94560	1.0000	mg/L	94.6		90 - 110		
<b>QC Batch ID: B045561</b>										
Ammonia as N	B045561-BS1	LCS	0.99730	1.0000	mg/L	99.7		90 - 110		

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Reported: 05/10/2019 13:26  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Richmar Farms Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B042205</b>		Used client sample: Y - Description: RIC-MW1, 04/18/2019 13:20								
Bicarbonate Alkalinity as CaCO3	DUP	1912624-01	398.89	397.67		mg/L	0.3		10	
Carbonate Alkalinity as CaCO3	DUP	1912624-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1912624-01	ND	ND		mg/L			10	
<b>QC Batch ID: B044136</b>		Used client sample: N								
Chloride	DUP	1912610-03	1.3000	1.3660		mg/L	5.0		10	
	MS	1912610-03	1.3000	54.305	50.505	mg/L		105		80 - 120
	MSD	1912610-03	1.3000	54.126	50.505	mg/L	0.3	105	10	80 - 120
Nitrate as N	DUP	1912610-03	0.064000	0.062000		mg/L	3.2		10	J
	MS	1912610-03	0.064000	5.5081	5.0505	mg/L		108		80 - 120
	MSD	1912610-03	0.064000	5.2545	5.0505	mg/L	4.7	103	10	80 - 120
Sulfate	DUP	1912610-03	0.48300	0.58000		mg/L	18.3		10	J,A02
	MS	1912610-03	0.48300	105.57	101.01	mg/L		104		80 - 120
	MSD	1912610-03	0.48300	105.02	101.01	mg/L	0.5	103	10	80 - 120
<b>QC Batch ID: B044248</b>		Used client sample: Y - Description: RIC-MW1, 04/18/2019 13:20								
Nitrite as N	DUP	1912624-01	ND	ND		mg/L			10	
	MS	1912624-01	ND	0.55977	0.52632	mg/L		106		90 - 110
	MSD	1912624-01	ND	0.55783	0.52632	mg/L	0.3	106	10	90 - 110
<b>QC Batch ID: B044438</b>		Used client sample: Y - Description: RIC-MW1, 04/18/2019 13:20								
Total Dissolved Solids @ 180 C	DUP	1912624-01	1040.0	1045.0		mg/L	0.5		10	
<b>QC Batch ID: B044664</b>		Used client sample: Y - Description: RIC-MW1, 04/18/2019 13:20								
Dissolved Calcium	DUP	1912624-01	74.593	75.007		mg/L	0.6		20	
	MS	1912624-01	74.593	84.182	10.204	mg/L		94.0		85 - 115
	MSD	1912624-01	74.593	84.264	10.204	mg/L	0.1	94.8	20	85 - 115
Dissolved Magnesium	DUP	1912624-01	11.796	11.836		mg/L	0.3		20	
	MS	1912624-01	11.796	22.092	10.204	mg/L		101		85 - 115
	MSD	1912624-01	11.796	21.874	10.204	mg/L	1.0	98.8	20	85 - 115
Dissolved Sodium	DUP	1912624-01	264.10	266.90		mg/L	1.1		20	
	MS	1912624-01	264.10	268.95	10.204	mg/L		47.5		85 - 115 A03
	MSD	1912624-01	264.10	267.81	10.204	mg/L	0.4	36.4	20	85 - 115 A03
Dissolved Potassium	DUP	1912624-01	2.9144	2.8252		mg/L	3.1		20	
	MS	1912624-01	2.9144	12.504	10.204	mg/L		94.0		85 - 115
	MSD	1912624-01	2.9144	12.769	10.204	mg/L	2.1	96.6	20	85 - 115
<b>QC Batch ID: B045265</b>		Used client sample: Y - Description: RIC-MW1, 04/18/2019 13:20								
Total Kjeldahl Nitrogen	DUP	1912624-01	0.24690	0.25420		mg/L	2.9		20	
	MS	1912624-01	0.24690	2.3518	2.0000	mg/L		105		90 - 110
	MSD	1912624-01	0.24690	2.4320	2.0000	mg/L	3.4	109	20	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B045266</b>		Used client sample: Y - Description: RIC-MW1, 04/18/2019 13:20								
Total Phosphate	DUP	1912624-01	0.65954	0.65494		mg/L	0.7		20	
	MS	1912624-01	0.65954	3.9585	3.0660	mg/L		108	80 - 120	
	MSD	1912624-01	0.65954	3.9870	3.0660	mg/L	0.7	109	20	80 - 120
<b>QC Batch ID: B045560</b>		Used client sample: N								
Ammonia as N	DUP	1912460-02	ND	ND		mg/L			10	
	MS	1912460-02	ND	1.0896	1.1111	mg/L		98.1	90 - 110	
	MSD	1912460-02	ND	1.0896	1.1111	mg/L	0	98.1	10	90 - 110
<b>QC Batch ID: B045561</b>		Used client sample: N								
Ammonia as N	DUP	1912631-01	ND	ND		mg/L			10	
	MS	1912631-01	ND	1.1081	1.1111	mg/L		99.7	90 - 110	
	MSD	1912631-01	ND	1.0790	1.1111	mg/L	2.7	97.1	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:26  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 03/04/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Sierra View Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1904774

Invoice ID: B332392

Enclosed are the results of analyses for samples received by the laboratory on 2/13/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000857324

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1904774

Samples were filtered through a 0.45 micron for requested dissolved analysis.



<b>BC Laboratories, Inc.</b> 4100 Atlas CL Bakersfield, CA 93308 (661) 327-4911		<b>Chain of Custody</b>	
<b>Report to:</b> Expanded Constituent Suite Project: Dairy Representative Monitoring Program Site: Sierra View Dairy Samplers Name: Wesley Sherman-Stacy Global ID - WDR100038790			
Name: Luhdorff and Scalmani Address: 500 First Street City: Woodland State: 96695 CA Attn: Titi Angermann		<b>Analysis Requested</b> From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3	
Lab # 1 2 3 4 5 6 7 8 9 10	Strike out non-sampled wells SIE-MW1 -1 SIE-MW2 SIE-MW3 -2 SIE-MW4 -3 Field Duplicate DWP-1 02/13/19	Date Sampled 02/15/19 02/13/19 02/13/19	Matrix W6 W6 W6
Time Sampled Ct Pe Unpreserved x x x x x		From Filtered Sample: Ammonia-N, NO3-N, NO2-N From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3	
Comments: 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luhdorff and Scalmani Consulting Engineers via email: llvagrino@lscs.com, rbryson@lscs.com, pdhalvick@lscs.com, jlovelis@lscs.com 4) Send invoices to Jeanette Lovelis (jlovelis@lscs.com).		Relinquished by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature)	
(A)= Analysis (C)= Container (P)= Preservative		DO Cl2 BOD MBAS COT Cr6 NO2 NO3 OF SS SHOEI HOLDING TIME	
Received By: [Signature] Date & Time: 2/13/19 21:10 Received By: [Signature] Date & Time: 2/13/19 23:20 Received By: [Signature] Date & Time:		DO Cl2 BOD MBAS COT Cr6 NO2 NO3 OF SS SHOEI HOLDING TIME	

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-04774

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/13 2320

Temperature: (A) 0.4 °C / (C) 0.7 °C Analyst Init: EML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	AB	4B	AB							
4oz / Box / 16oz PE UNPRES										
2oz Cr*										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / Box / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	C	C	C							
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: 68 Date/Time: 2/13/2011

A = Actual / C = Corrected

Rev 21 05/23/2016  
[S:\WPDoc\Word\Public\LAB\_DOCS\FORMS\ISS\AMTECrev 20]



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 9:00  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1904774-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/13/2019 23:20
	<b>Project Number:</b> Sierra View Dairy	<b>Sampling Date:</b> 02/13/2019 11:05
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> SIE-MW1	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Water

Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1904774-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/13/2019 23:20
	<b>Project Number:</b> Sierra View Dairy	<b>Sampling Date:</b> 02/13/2019 09:55
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> SIE-MW3	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Water

Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1904774-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/13/2019 23:20
	<b>Project Number:</b> Sierra View Dairy	<b>Sampling Date:</b> 02/13/2019 12:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Field Duplicate	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> wesley Sherman-Shochley of DTO	<b>Sample Type:</b> Water

Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 9:00  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1904774-01	<b>Client Sample Name:</b> Sierra View Dairy, SIE-MW1, 2/13/2019 11:05:00AM, wesley Sherman-Shochley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	97	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	18	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	29	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.6	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	220	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	15	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	29	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	35	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	430	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.52	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.084	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.49	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/14/19 15:30	02/25/19 18:01	JRG	PE-OP2	1	B038572
2	SM-2320B	02/14/19 15:00	02/14/19 16:07	MEV	MET-1	1	B031696
3	EPA-300.0	02/13/19 20:00	02/14/19 03:17	EMM	IC5	2	B037691
4	SM-2540C	02/15/19 12:45	02/15/19 12:45	NW1	MANUAL	3.333	B037809
5	EPA-351.2	02/20/19 20:30	02/22/19 14:09	JMH	SC-1	1	B038170
6	EPA-350.1	02/28/19 11:30	02/28/19 15:39	JMH	SC-1	1	B038876
7	EPA-353.2	02/14/19 10:32	02/14/19 10:36	MC1	KONE-1	1	B037830
8	EPA-365.4	02/20/19 20:30	02/25/19 12:55	JMH	SC-1	1	B038171

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500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 9:00  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1904774-02		Client Sample Name: Sierra View Dairy, SIE-MW3, 2/13/2019 9:55:00AM, wesley Sherman-Shochley						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	73	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	22	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	44	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.2	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	250	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	11	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	21	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	33	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	410	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.31	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.063	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	7.7	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/14/19 15:35	02/25/19 18:15	JRG	PE-OP2	1	B038572
2	SM-2320B	02/14/19 15:00	02/14/19 16:13	MEV	MET-1	1	B031696
3	EPA-300.0	02/13/19 20:00	02/14/19 03:35	EMM	IC5	2	B037691
4	SM-2540C	02/15/19 12:45	02/15/19 12:45	NW1	MANUAL	3.333	B037809
5	EPA-351.2	02/20/19 20:30	02/22/19 14:25	JMH	SC-1	1	B038170
6	EPA-350.1	02/28/19 11:30	02/28/19 15:45	JMH	SC-1	1	B038876
7	EPA-353.2	02/14/19 10:32	02/14/19 10:36	MC1	KONE-1	1	B037830
8	EPA-365.4	02/20/19 20:30	02/25/19 13:12	JMH	SC-1	5	B038171

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 9:00  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1904774-03	<b>Client Sample Name:</b> Sierra View Dairy, Field Duplicate, 2/13/2019 12:00:00PM, wesley Sherman-Shochley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	81	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	16	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	25	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.97	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	210	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	14	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	27	mg/L	0.20	0.042	EPA-300.0	ND		3
Sulfate	31	mg/L	2.0	0.26	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	410	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.70	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.092	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.83	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/28/19 09:00	02/28/19 15:12	JRG	PE-OP2	1	B038379
2	SM-2320B	02/14/19 15:00	02/14/19 16:19	MEV	MET-1	1	B031696
3	EPA-300.0	02/13/19 20:00	02/14/19 03:53	EMM	IC5	2	B037691
4	SM-2540C	02/15/19 12:45	02/15/19 12:45	NW1	MANUAL	3.333	B037809
5	EPA-351.2	02/20/19 20:30	02/22/19 14:14	JMH	SC-1	1	B038170
6	EPA-350.1	02/28/19 11:30	02/28/19 15:48	JMH	SC-1	1	B038876
7	EPA-353.2	02/14/19 10:32	02/14/19 10:36	MC1	KONE-1	1	B037830
8	EPA-365.4	02/20/19 20:30	02/25/19 12:58	JMH	SC-1	1	B038171

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 9:00  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031696</b>						
Bicarbonate Alkalinity as CaCO3	B031696-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031696-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031696-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B037691</b>						
Chloride	B037691-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B037691-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B037691-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B037809</b>						
Total Dissolved Solids @ 180 C	B037809-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B037830</b>						
Nitrite as N	B037830-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038170</b>						
Total Kjeldahl Nitrogen	B038170-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B038171</b>						
Total Phosphate	B038171-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B038379</b>						
Dissolved Calcium	B038379-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038379-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038379-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038379-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B038572</b>						
Dissolved Calcium	B038572-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038572-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038572-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038572-BLK2	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B038876</b>						
Ammonia as N	B038876-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 9:00  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B037691</b>										
Chloride	B037691-BS1	LCS	51.008	50.000	mg/L	102		90 - 110		
Nitrate as N	B037691-BS1	LCS	5.0580	5.0000	mg/L	101		90 - 110		
Sulfate	B037691-BS1	LCS	99.902	100.00	mg/L	99.9		90 - 110		
<b>QC Batch ID: B037809</b>										
Total Dissolved Solids @ 180 C	B037809-BS1	LCS	565.00	586.00	mg/L	96.4		90 - 110		
<b>QC Batch ID: B037830</b>										
Nitrite as N	B037830-BS1	LCS	0.49514	0.50000	mg/L	99.0		90 - 110		
<b>QC Batch ID: B038170</b>										
Total Kjeldahl Nitrogen	B038170-BS1	LCS	2.0832	2.0000	mg/L	104		90 - 110		
<b>QC Batch ID: B038171</b>										
Total Phosphate	B038171-BS1	LCS	3.0282	3.0660	mg/L	98.8		85 - 115		
<b>QC Batch ID: B038379</b>										
Dissolved Calcium	B038379-BS1	LCS	10.130	10.000	mg/L	101		85 - 115		
Dissolved Magnesium	B038379-BS1	LCS	10.251	10.000	mg/L	103		85 - 115		
Dissolved Sodium	B038379-BS1	LCS	9.2901	10.000	mg/L	92.9		85 - 115		
Dissolved Potassium	B038379-BS1	LCS	9.5719	10.000	mg/L	95.7		85 - 115		
<b>QC Batch ID: B038572</b>										
Dissolved Calcium	B038572-BS1	LCS	10.187	10.000	mg/L	102		85 - 115		
Dissolved Magnesium	B038572-BS1	LCS	10.110	10.000	mg/L	101		85 - 115		
Dissolved Sodium	B038572-BS1	LCS	9.2896	10.000	mg/L	92.9		85 - 115		
Dissolved Potassium	B038572-BS2	LCS	9.1479	10.000	mg/L	91.5		85 - 115		
<b>QC Batch ID: B038876</b>										
Ammonia as N	B038876-BS1	LCS	1.0076	1.0000	mg/L	101		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/04/2019 9:00  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Sierra View Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B031696</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1904714-01	401.93	397.37		mg/L	1.1		10	
Carbonate Alkalinity as CaCO3	DUP	1904714-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1904714-01	ND	ND		mg/L			10	
<b>QC Batch ID: B037691</b>		Used client sample: N								
Chloride	DUP	1904711-01	200.10	200.34		mg/L	0.1		10	
	MS	1904711-01	200.10	243.20	50.505	mg/L		85.3		80 - 120
	MSD	1904711-01	200.10	243.64	50.505	mg/L	0.2	86.2	10	80 - 120
Nitrate as N	DUP	1904711-01	5.0420	5.0350		mg/L	0.1		10	
	MS	1904711-01	5.0420	10.256	5.0505	mg/L		103		80 - 120
	MSD	1904711-01	5.0420	10.301	5.0505	mg/L	0.4	104	10	80 - 120
Sulfate	DUP	1904711-01	66.236	65.900		mg/L	0.5		10	
	MS	1904711-01	66.236	173.28	101.01	mg/L		106		80 - 120
	MSD	1904711-01	66.236	172.56	101.01	mg/L	0.4	105	10	80 - 120
<b>QC Batch ID: B037809</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1904774-01	430.00	436.66		mg/L	1.5		10	
<b>QC Batch ID: B037830</b>		Used client sample: N								
Nitrite as N	DUP	1904683-01	ND	ND		mg/L			10	
	MS	1904683-01	ND	0.53101	0.52632	mg/L		101		90 - 110
	MSD	1904683-01	ND	0.52863	0.52632	mg/L	0.5	100	10	90 - 110
<b>QC Batch ID: B038170</b>		Used client sample: Y - Description: SIE-MW1, 02/13/2019 11:05								
Total Kjeldahl Nitrogen	DUP	1904774-01	0.51890	0.46330		mg/L	11.3		20	
	MS	1904774-01	0.51890	2.6049	2.0000	mg/L		104		90 - 110
	MSD	1904774-01	0.51890	2.6356	2.0000	mg/L	1.2	106	20	90 - 110
<b>QC Batch ID: B038171</b>		Used client sample: Y - Description: SIE-MW1, 02/13/2019 11:05								
Total Phosphate	DUP	1904774-01	0.48538	0.49642		mg/L	2.2		20	
	MS	1904774-01	0.48538	3.6101	3.0660	mg/L		102		80 - 120
	MSD	1904774-01	0.48538	3.5559	3.0660	mg/L	1.5	100	20	80 - 120
<b>QC Batch ID: B038379</b>		Used client sample: N								
Dissolved Calcium	DUP	1904659-01	25.220	25.163		mg/L	0.2		20	
	MS	1904659-01	25.220	35.732	10.204	mg/L		103		85 - 115
	MSD	1904659-01	25.220	35.634	10.204	mg/L	0.3	102	20	85 - 115
Dissolved Magnesium	DUP	1904659-01	24.600	24.185		mg/L	1.7		20	
	MS	1904659-01	24.600	34.848	10.204	mg/L		100		85 - 115
	MSD	1904659-01	24.600	34.726	10.204	mg/L	0.4	99.2	20	85 - 115

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 9:00  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B038379</b>		Used client sample: N								
Dissolved Sodium	DUP	1904659-01	22.267	22.206		mg/L	0.3		20	
	MS	1904659-01	22.267	32.505	10.204	mg/L		100		85 - 115
	MSD	1904659-01	22.267	32.435	10.204	mg/L	0.2	99.6	20	85 - 115
Dissolved Potassium	DUP	1904659-01	0.64371	0.62775		mg/L	2.5		20	J
	MS	1904659-01	0.64371	10.624	10.204	mg/L		97.8		85 - 115
	MSD	1904659-01	0.64371	10.700	10.204	mg/L	0.7	98.6	20	85 - 115
<b>QC Batch ID: B038572</b>		Used client sample: Y - Description: SIE-MW1, 02/13/2019 11:05								
Dissolved Calcium	DUP	1904774-01	97.044	97.618		mg/L	0.6		20	
	MS	1904774-01	97.044	108.23	10.204	mg/L		110		85 - 115
	MSD	1904774-01	97.044	108.47	10.204	mg/L	0.2	112	20	85 - 115
Dissolved Magnesium	DUP	1904774-01	18.491	18.608		mg/L	0.6		20	
	MS	1904774-01	18.491	28.789	10.204	mg/L		101		85 - 115
	MSD	1904774-01	18.491	28.919	10.204	mg/L	0.5	102	20	85 - 115
Dissolved Sodium	DUP	1904774-01	28.918	29.219		mg/L	1.0		20	
	MS	1904774-01	28.918	39.527	10.204	mg/L		104		85 - 115
	MSD	1904774-01	28.918	39.513	10.204	mg/L	0.0	104	20	85 - 115
Dissolved Potassium	DUP	1904774-01	1.6258	1.5425		mg/L	5.3		20	
	MS	1904774-01	1.6258	11.233	10.204	mg/L		94.2		85 - 115
	MSD	1904774-01	1.6258	11.250	10.204	mg/L	0.2	94.3	20	85 - 115
<b>QC Batch ID: B038876</b>		Used client sample: Y - Description: SIE-MW1, 02/13/2019 11:05								
Ammonia as N	DUP	1904774-01	0.084100	0.087500		mg/L	4.0		10	J
	MS	1904774-01	0.084100	1.2718	1.1111	mg/L		107		90 - 110
	MSD	1904774-01	0.084100	1.2680	1.1111	mg/L	0.3	107	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/04/2019 9:00  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 03/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Zonneveld Dairy Complex

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905553

Invoice ID: B333332

Enclosed are the results of analyses for samples received by the laboratory on 2/20/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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**1905553-01 - ZON-MW3B**

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## Case Narratives

### Case Narrative for Work Order 1905553

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



19-05553

BC Laboratories, Inc.

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

Chain of Custody

Report to:

Expanded Constituent Suite  
Project: Dairy Representative Monitoring Program  
Site: Zoinneveld Dairy Complex  
Samplers Name: Wesley Sherman-Shawley  
Global ID - WDR10003854

Analysis Requested

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	O1/P6 Unpreserved	Analysis Requested		
						From Filtered Sample: Ammonia-N, NO3-N, NO2-N	From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
1	ZON-MW1A, ZON-MW1B				X	X	X	X
2	ZON-MW1C				X	X	X	X
3	ZON-MW2A, ZON-MW2B				X	X	X	X
4	ZON-MW3A (ZON-MW3B) -1	2/20/19	1415	CO2	X	X	X	X
5	ZON-MW4A, ZON-MW4B				X	X	X	X
6	ZON-MW5A, ZON-MW5B				X	X	X	X
7	ZON-MWZ				X	X	X	X
8	Field Duplicate				X	X	X	X
9								
10								

Comments:

1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: jlavagnino@lscce.com, rlryson@lscce.com, pdhall@lscce.com, jlovelis@lscce.com  
4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).

Relinquished by: (Signature) *[Signature]* Date & Time 2/20/19 20:45  
 Relinquished by: (Signature) *[Signature]* Date & Time 2/20/19 22:30  
 Relinquished by: (Signature) *[Signature]* Date & Time 2/20/19 22:30

(A)= Analysis (C)= Container (P)= Preservative



BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-05553

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/20/2016 Analyst Init: EMC

Temperature: (A) 30 °C / (C) 3.3 °C

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES 4oz / 8oz / 16oz PE UNPRES	AB									
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	C									
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 508/608/8080										
QT EPA 515.1/6150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

SHORT HOLDING TIME  
Cr<sup>6+</sup> (NO) OF SS  
EO Cr<sup>6+</sup> TOB MBAS COC

KEY DISTRIBUTION  
SUB-DIST

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: EMC Date/Time: 2-20-16 2257 Rev 21 06/23/2016  
 A = Actual / C = Corrected

18:\WP\Doc\Work\Per\test\LAB\_DOC\FORMS\IGANRECrev 201



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:46  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905553-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Zonneveld Dairy Complex	<b>Sampling Date:</b>	02/20/2019 14:15
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ZON-MW3B	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Wesley Sherman-Shochley of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:46  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905553-01	Client Sample Name:	Zonneveld Dairy Complex, ZON-MW3B, 2/20/2019 2:15:00PM, Wesley Sherman-Shochley						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	ND		1	
Dissolved Magnesium	3.7	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	73	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	0.90	mg/L	1.0	0.10	EPA-200.7	ND	J	1	
Bicarbonate Alkalinity as CaCO3	300	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	21	mg/L	2.5	0.34	EPA-300.0	ND	A07	3	
Nitrate as N	48	mg/L	0.50	0.095	EPA-300.0	ND	A07	3	
Sulfate	37	mg/L	5.0	0.70	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	600	mg/L	33	17	SM-2540C	ND		4	
Total Kjeldahl Nitrogen	0.89	mg/L	0.20	0.036	EPA-351.2	ND		5	
Ammonia as N	0.10	mg/L	0.20	0.050	EPA-350.1	ND	J	6	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7	
Total Phosphate	0.069	mg/L	0.15	0.050	EPA-365.4	ND	J	8	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:35	02/28/19 17:22	JRG	PE-OP2	1	B038592
2	SM-2320B	02/22/19 12:00	02/22/19 16:20	MEV	MET-1	2	B031729
3	EPA-300.0	02/21/19 13:00	02/21/19 16:07	EMM	IC2	5	B038229
4	SM-2540C	02/25/19 13:00	02/25/19 13:00	CAD	MANUAL	3.333	B038491
5	EPA-351.2	03/03/19 10:00	03/11/19 08:24	JMH	SC-1	1	B039138
6	EPA-350.1	03/08/19 11:30	03/12/19 08:05	JMH	SC-1	1	B039666
7	EPA-353.2	02/21/19 11:29	02/21/19 11:29	MC1	KONE-1	1	B038508
8	EPA-365.4	03/03/19 10:00	03/11/19 10:51	JMH	SC-1	1	B039139

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:46  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031729</b>						
Bicarbonate Alkalinity as CaCO3	B031729-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031729-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031729-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038229</b>						
Chloride	B038229-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038229-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038229-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038491</b>						
Total Dissolved Solids @ 180 C	B038491-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038508</b>						
Nitrite as N	B038508-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038592</b>						
Dissolved Calcium	B038592-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038592-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038592-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038592-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039138</b>						
Total Kjeldahl Nitrogen	B039138-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039139</b>						
Total Phosphate	B039139-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039666</b>						
Ammonia as N	B039666-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/12/2019 13:46  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038229</b>										
Chloride	B038229-BS1	LCS	53.315	50.000	mg/L	107		90 - 110		
Nitrate as N	B038229-BS1	LCS	5.1860	5.0000	mg/L	104		90 - 110		
Sulfate	B038229-BS1	LCS	105.10	100.00	mg/L	105		90 - 110		
<b>QC Batch ID: B038491</b>										
Total Dissolved Solids @ 180 C	B038491-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B038508</b>										
Nitrite as N	B038508-BS1	LCS	0.50553	0.50000	mg/L	101		90 - 110		
<b>QC Batch ID: B038592</b>										
Dissolved Calcium	B038592-BS1	LCS	9.7714	10.000	mg/L	97.7		85 - 115		
Dissolved Magnesium	B038592-BS1	LCS	9.3331	10.000	mg/L	93.3		85 - 115		
Dissolved Sodium	B038592-BS1	LCS	8.8367	10.000	mg/L	88.4		85 - 115		
Dissolved Potassium	B038592-BS1	LCS	9.1714	10.000	mg/L	91.7		85 - 115		
<b>QC Batch ID: B039138</b>										
Total Kjeldahl Nitrogen	B039138-BS1	LCS	2.0136	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B039139</b>										
Total Phosphate	B039139-BS1	LCS	3.1202	3.0660	mg/L	102		85 - 115		
<b>QC Batch ID: B039666</b>										
Ammonia as N	B039666-BS1	LCS	0.97340	1.0000	mg/L	97.3		90 - 110		

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Reported: 03/12/2019 13:46
Project: Dairy Rep MP - Expanded Suite
Project Number: Zonneveld Dairy Complex
Project Manager: Till Angermann

Water Analysis (General Chemistry)
Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes sections for QC Batch IDs B031729, B038229, B038491, B038508, B038592, and B039138.

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Woodland, CA 95695

**Reported:** 03/12/2019 13:46  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B039139</b>		Used client sample: N								
Total Phosphate	DUP	1905552-01	0.94286	0.96831		mg/L	2.7		20	
	MS	1905552-01	0.94286	4.0685	3.0660	mg/L		102	80 - 120	
	MSD	1905552-01	0.94286	4.0796	3.0660	mg/L	0.3	102	20	80 - 120
<b>QC Batch ID: B039666</b>		Used client sample: N								
Ammonia as N	DUP	1905552-01	0.12460	0.11200		mg/L	10.7		10	J,A02
	MS	1905552-01	0.12460	1.1937	1.1111	mg/L		96.2	90 - 110	
	MSD	1905552-01	0.12460	1.2296	1.1111	mg/L	3.0	99.4	10	90 - 110

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Woodland, CA 95695

**Reported:** 03/12/2019 13:46  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 05/10/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Zonneveld Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1912449

Invoice ID: B339503

Enclosed are the results of analyses for samples received by the laboratory on 4/18/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000884766

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1912449

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		4100 Atlas CL Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to:				Analysis Requested	
Name: Luhdorff and Scalmanini		Expanded Constituent Suite		From Unfiltered Sample:	
Address: 500 First Street		Project: Dairy Representative Monitoring Program		Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3	
City: Woodland		Site: Zonneveld Dairy Complex		From Filtered Sample:	
State: 95695		Samplers Name: <i>E. J. Lovell</i>		Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	
Attn: Tili Angermann		Global ID - WDR100038511		From Filtered Sample:	
Lab #		Date Sampled		Ammonia-N, NO3-N, NO2-N	
Strike out non-sampled wells		Time Sampled		Qt Fe Unpreserved	
1 ZON-MW4A, ZON-MW4B		4/17/19		Matrix	
2 ZON-MW1C		1345		W	
3 ZON-MW2A, ZON-MW2B					
4 ZON-MW3A, ZON-MW3B					
5 ZON-MW4A, ZON-MW4B					
6 ZON-MW5A, ZON-MW5B					
7 ZON-MW7					
8 Field Duplicate					
9					
10					
Comments:		CHK BY: <i>[Signature]</i>		DISTRIBUTION <input checked="" type="checkbox"/>	
1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.		Relinquished by: (Signature)		SUB-OUT <input type="checkbox"/>	
2) Lab reports shall identify sampled wells exactly as shown on this CoC.		Relinquished by: (Signature)		SHORT HOLDING TIME <input type="checkbox"/>	
3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: <a href="mailto:lls@agnco@isce.com">lls@agnco@isce.com</a> , <a href="mailto:rlryson@isce.com">rlryson@isce.com</a> , <a href="mailto:pdh@lval@isce.com">pdh@lval@isce.com</a> , <a href="mailto:jlovelis@isce.com">jlovelis@isce.com</a>		Relinquished by: (Signature)		NO <sub>3</sub> <input type="checkbox"/>	
4) Send invoices to Jeanette Lovells ( <a href="mailto:jlovelis@isce.com">jlovelis@isce.com</a> ).		Relinquished by: (Signature)		NO <sub>2</sub> <input type="checkbox"/>	
(A) = Analysis (C) = Container (P) = Preservative		Received By: <i>[Signature]</i>		BOD <input type="checkbox"/>	
		Date & Time: 4-18-19 0830		Received By: <i>[Signature]</i>	
		Date & Time		Received By: <i>[Signature]</i>	
		Date & Time		Received By: <i>[Signature]</i>	

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-12449

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) 090

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO

Emissivity: 0.95 Container: pe Thermometer ID: 274 Date/Time: 4-18-19 0830

Temperature: (A) 1.0 °C / (C) 1.1 °C Analyst Init: KJG

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B									
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: RAZ Date/Time: 4/18/19 1015 Rev 21 05/23/2016



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1912449-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	04/18/2019 08:30
	<b>Project Number:</b>	Zonneveld	<b>Sampling Date:</b>	04/17/2019 13:45
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ZON-MW2B	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1912449-01	<b>Client Sample Name:</b> Zonneveld, ZON-MW2B, 4/17/2019 1:45:00PM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	17	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	0.46	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	63	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.80	mg/L	1.0	0.10	EPA-200.7	0.12	J	1
Bicarbonate Alkalinity as CaCO3	76	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	16	mg/L	0.50	0.15	EPA-300.0	ND		3
Nitrate as N	18	mg/L	0.10	0.042	EPA-300.0	ND		3
Sulfate	36	mg/L	1.0	0.20	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	270	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.45	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.059	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.89	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/20/19 12:46	04/23/19 19:13	JRG	PE-OP2	1	B044372
2	SM-2320B	04/19/19 10:00	04/19/19 14:39	MEV	MET-1	1	B042195
3	EPA-300.0	04/18/19 13:00	04/18/19 20:10	KEB	IC2	1	B044053
4	SM-2540C	04/19/19 15:45	04/19/19 15:45	NW1	MANUAL	2	B044082
5	EPA-351.2	05/01/19 21:30	05/02/19 09:14	JMH	SC-1	1	B045153
6	EPA-350.1	05/07/19 08:18	05/07/19 13:38	JMH	SC-1	1	B045533
7	EPA-353.2	04/18/19 09:22	04/18/19 11:59	MC1	KONE-1	1	B044231
8	EPA-365.4	05/01/19 21:30	05/03/19 09:30	JMH	SC-1	1	B045154

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Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B042195</b>						
Bicarbonate Alkalinity as CaCO3	B042195-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B042195-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B042195-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B044053</b>						
Chloride	B044053-BLK1	ND	mg/L	0.50	0.15	
Nitrate as N	B044053-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B044053-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B044082</b>						
Total Dissolved Solids @ 180 C	B044082-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B044231</b>						
Nitrite as N	B044231-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B044372</b>						
Dissolved Calcium	B044372-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B044372-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B044372-BLK1	ND	mg/L	0.50	0.051	
<b>Dissolved Potassium</b>	<b>B044372-BLK1</b>	<b>0.12348</b>	<b>mg/L</b>	<b>1.0</b>	<b>0.10</b>	<b>J</b>
<b>QC Batch ID: B045153</b>						
Total Kjeldahl Nitrogen	B045153-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B045154</b>						
Total Phosphate	B045154-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B045533</b>						
Ammonia as N	B045533-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B044053</b>										
Chloride	B044053-BS1	LCS	52.749	50.000	mg/L	105		90 - 110		
Nitrate as N	B044053-BS1	LCS	5.2180	5.0000	mg/L	104		90 - 110		
Sulfate	B044053-BS1	LCS	105.75	100.00	mg/L	106		90 - 110		
<b>QC Batch ID: B044082</b>										
Total Dissolved Solids @ 180 C	B044082-BS1	LCS	575.00	586.00	mg/L	98.1		90 - 110		
<b>QC Batch ID: B044231</b>										
Nitrite as N	B044231-BS1	LCS	0.51502	0.50000	mg/L	103		90 - 110		
<b>QC Batch ID: B044372</b>										
Dissolved Calcium	B044372-BS1	LCS	9.7864	10.000	mg/L	97.9		85 - 115		
Dissolved Magnesium	B044372-BS1	LCS	9.5914	10.000	mg/L	95.9		85 - 115		
Dissolved Sodium	B044372-BS1	LCS	8.8373	10.000	mg/L	88.4		85 - 115		
Dissolved Potassium	B044372-BS1	LCS	8.9854	10.000	mg/L	89.9		85 - 115		
<b>QC Batch ID: B045153</b>										
Total Kjeldahl Nitrogen	B045153-BS1	LCS	1.9987	2.0000	mg/L	99.9		90 - 110		
<b>QC Batch ID: B045154</b>										
Total Phosphate	B045154-BS1	LCS	3.3826	3.0660	mg/L	110		85 - 115		
<b>QC Batch ID: B045533</b>										
Ammonia as N	B045533-BS1	LCS	0.96070	1.0000	mg/L	96.1		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B045154</b>		Used client sample: N								
Total Phosphate	DUP	1912406-01	ND	ND		mg/L			20	
	MS	1912406-01	ND	3.0757	3.0660	mg/L		100		80 - 120
	MSD	1912406-01	ND	3.1389	3.0660	mg/L	2.0	102	20	80 - 120
<b>QC Batch ID: B045533</b>		Used client sample: Y - Description: ZON-MW2B, 04/17/2019 13:45								
Ammonia as N	DUP	1912449-01	0.058600	ND		mg/L			10	
	MS	1912449-01	0.058600	1.0894	1.1111	mg/L		92.8		90 - 110
	MSD	1912449-01	0.058600	1.1350	1.1111	mg/L	4.1	96.9	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/10/2019 13:13  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Zonneveld Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



## Central Area

---





Date of Report: 03/08/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Albert Mendes Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1905549  
Invoice ID: B333045

Enclosed are the results of analyses for samples received by the laboratory on 2/20/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905549

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		Chain of Custody								
19-05549		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911								
Report to:										
Expanded Constituent Suite										
Project: Dairy Representative Monitoring Program										
Site: Albert Mendes Dairy 1/0tr-2019										
Samplers Name: Antonio Del-Tech										
Global ID - GADAIRY00001										
Name:	Luhdorff and Scalmanini									
Address:	500 First Street									
City:	Woodland									
State:	95695									
CA:	Till Angermann									
Attn:										
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ot	Pre	Unpreserved	From Filtered Sample:	From Filtered Sample:	From Unfiltered Sample:
-1	MEN-MW1s, MEN-MW1d	2/20/19	1344	GW	x		x	Ammonia-N, NO3-N, NO2-N	Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
-2	MEN-MW2s, MEN-MW2d		1328		x		x			
-3	MEN-MW3s, MEN-MW3d		1502		x		x			
-4	MEN-MW4s, MEN-MW4d		1446		x		x			
-5	MEN-MW5s, MEN-MW5d		1427		x		x			
-6	MEN-MW6s, MEN-MW6d		1311		x		x			
-7	MEN-MW7s, MEN-MW7d		1411		x		x			
-8	MEN-MW8s, MEN-MW8d		1531		x		x			
9	Field Duplicate				x		x			
10										
11										
12										
Comments:				Relinquished by: (Signature) <i>[Signature]</i>	2/20/19	1720	Received By: <i>[Signature]</i>	2/20/19	17:20	
1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.				Relinquished by: (Signature) <i>[Signature]</i>			Received By: <i>[Signature]</i>	2/20/19	2230	
2) Lab reports shall identify sampled wells exactly as shown on this CoC.				Relinquished by: (Signature) <i>[Signature]</i>			Received By: <i>[Signature]</i>	2/20/19	2230	
3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llvagnino@lscce.com, rhyyson@lscce.com, pdhalival@lscce.com, jlovelis@lscce.com										
4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).										

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# BC Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-05549

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/20 2230  
 Temperature: (A) 0.7 °C / (C) 1.0 °C Analyst Init: EMC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

STOP HOLDING TIME  
 C-16 NO OP SS  
 DO O<sub>2</sub> BOD MBAS COT

DISTRIBUTION  
 IN/OUT  
 SUB-OUT

CHK BY [Signature]

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: EMC Date/Time: 2-20-19 2250 Rev 21 05/23/2016  
 A = Actual / C = Corrected

(S:\WPDoc\WordPerfect\LAB\_DOC\FORMS\SAMRECrev 20)



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905549-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	02/20/2019 13:44
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905549-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	02/20/2019 13:28
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905549-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	02/20/2019 15:02
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905549-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	02/20/2019 14:46
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905549-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	02/20/2019 14:27
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905549-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	02/20/2019 13:11
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905549-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	02/20/2019 14:11
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905549-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	02/20/2019 15:31
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW8d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/08/2019 15:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Albert Mendes Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905549-01	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW1s, 2/20/2019 1:44:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	290	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	160	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	560	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	210	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	1000	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	880	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	71	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	360	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	3500	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	4.3	mg/L	1.0	0.18	EPA-351.2	ND	A07	5
Ammonia as N	2.4	mg/L	1.0	0.25	EPA-350.1	ND	A07	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.3	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:00	02/27/19 19:41	JRG	PE-OP2	1	B038591
2	SM-2320B	02/22/19 07:30	02/22/19 13:48	MEV	MET-1	2	B031727
3	EPA-300.0	02/21/19 08:58	02/21/19 15:49	EMM	IC8	5	B038228
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	20	B038375
5	EPA-351.2	03/01/19 20:30	03/04/19 16:37	JMH	SC-1	5	B039117
6	EPA-350.1	03/07/19 12:57	03/08/19 12:03	JMH	SC-1	5	B039573
7	EPA-353.2	02/21/19 10:48	02/21/19 10:48	MC1	KONE-1	1	B038507
8	EPA-365.4	03/01/19 20:30	03/05/19 08:11	JMH	SC-1	1	B039118

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905549-02	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW2s, 2/20/2019 1:28:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	300	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	390	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	170	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	820	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	750	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	34	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	260	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2700	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	3.3	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	1.7	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.17	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.44	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:02	02/27/19 19:52	JRG	PE-OP2	1	B038591
2	SM-2320B	02/22/19 07:30	02/22/19 13:55	MEV	MET-1	2	B031727
3	EPA-300.0	02/21/19 08:58	02/21/19 23:41	EMM	IC8	5	B038228
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	20	B038375
5	EPA-351.2	03/01/19 20:30	03/04/19 15:50	JMH	SC-1	1	B039117
6	EPA-350.1	03/07/19 12:52	03/08/19 11:24	JMH	SC-1	1	B039573
7	EPA-353.2	02/21/19 10:48	02/21/19 10:48	MC1	KONE-1	1	B038507
8	EPA-365.4	03/01/19 20:30	03/05/19 08:14	JMH	SC-1	1	B039118

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/08/2019 15:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Albert Mendes Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905549-03	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW3s, 2/20/2019 3:02:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	270	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	91	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	340	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	59	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	640	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	420	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	98	mg/L	1.0	0.21	EPA-300.0	ND	A07	4
Sulfate	230	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2300	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	1.9	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.25	mg/L	0.20	0.050	EPA-350.1	ND		7
Nitrite as N	0.41	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	18	mg/L	0.75	0.25	EPA-365.4	ND	A07	9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:04	02/27/19 19:55	JRG	PE-OP2	1	B038591
2	SM-2320B	02/22/19 12:00	02/22/19 14:32	MEV	MET-1	2	B031728
3	EPA-300.0	02/21/19 08:58	02/22/19 01:44	EMM	IC8	5	B038228
4	EPA-300.0	02/21/19 08:58	02/21/19 18:13	KEB	IC8	10	B038228
5	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	10	B038375
6	EPA-351.2	03/01/19 20:30	03/04/19 15:51	JMH	SC-1	1	B039117
7	EPA-350.1	03/07/19 12:52	03/08/19 11:19	JMH	SC-1	1	B039573
8	EPA-353.2	02/21/19 10:48	02/21/19 10:48	MC1	KONE-1	1	B038507
9	EPA-365.4	03/01/19 20:30	03/05/19 08:34	JMH	SC-1	5	B039118

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Woodland, CA 95695

**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905549-04	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW4s, 2/20/2019 2:46:00PM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	330	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	94	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	320	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	15	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	590	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	460	mg/L	5.0	0.77	EPA-300.0	ND	A07	3
Nitrate as N	120	mg/L	1.0	0.21	EPA-300.0	ND	A07	3
Sulfate	200	mg/L	10	1.3	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2400	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.4	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.18	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.38	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	12	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:06	02/27/19 20:03	JRG	PE-OP2	1	B038591
2	SM-2320B	02/22/19 12:00	02/22/19 14:39	MEV	MET-1	2	B031728
3	EPA-300.0	02/21/19 08:58	02/21/19 18:33	KEB	IC8	10	B038228
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	10	B038375
5	EPA-351.2	03/01/19 20:30	03/04/19 15:51	JMH	SC-1	1	B039117
6	EPA-350.1	03/07/19 12:52	03/08/19 11:26	JMH	SC-1	1	B039573
7	EPA-353.2	02/21/19 10:48	02/21/19 10:48	MC1	KONE-1	1	B038507
8	EPA-365.4	03/01/19 20:30	03/05/19 08:36	JMH	SC-1	5	B039118

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**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905549-05	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW5s, 2/20/2019 2:27:00PM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	190	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	39	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	160	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	35	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	420	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	250	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	46	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	61	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.88	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.10	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.047	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.63	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:08	02/27/19 20:05	JRG	PE-OP2	1	B038591
2	SM-2320B	02/22/19 12:00	02/22/19 14:45	MEV	MET-1	2	B031728
3	EPA-300.0	02/21/19 08:58	02/21/19 18:54	KEB	IC8	5	B038228
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	5	B038375
5	EPA-351.2	03/01/19 20:30	03/04/19 15:55	JMH	SC-1	1	B039117
6	EPA-350.1	03/07/19 12:52	03/08/19 11:26	JMH	SC-1	1	B039573
7	EPA-353.2	02/21/19 10:48	02/21/19 10:48	MC1	KONE-1	1	B038507
8	EPA-365.4	03/01/19 20:30	03/05/19 08:17	JMH	SC-1	1	B039118

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**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905549-06	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW6s, 2/20/2019 1:11:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	220	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	55	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	290	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	35	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	690	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	370	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	17	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	180	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	4.3	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	2.3	mg/L	1.0	0.25	EPA-350.1	ND	A07	6
Nitrite as N	0.49	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	7.1	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:10	02/27/19 20:08	JRG	PE-OP2	1	B038591
2	SM-2320B	02/22/19 12:00	02/22/19 14:51	MEV	MET-1	2	B031728
3	EPA-300.0	02/21/19 08:58	02/22/19 02:04	EMM	IC8	2	B038228
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	10	B038375
5	EPA-351.2	03/01/19 20:30	03/04/19 15:55	JMH	SC-1	1	B039117
6	EPA-350.1	03/07/19 12:52	03/08/19 12:05	JMH	SC-1	5	B039573
7	EPA-353.2	02/21/19 10:48	02/21/19 10:51	MC1	KONE-1	1	B038507
8	EPA-365.4	03/01/19 20:30	03/05/19 08:37	JMH	SC-1	5	B039118

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Reported: 03/08/2019 15:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Albert Mendes Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905549-07	Client Sample Name:	Albert Mendes Dairy, MEN-MW7s, 2/20/2019 2:11:00PM, Antonio Morales					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	190	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	66	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	240	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	4.2	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	490	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	230	mg/L	5.0	0.77	EPA-300.0	ND	A07	3
Nitrate as N	75	mg/L	1.0	0.21	EPA-300.0	ND	A07	3
Sulfate	110	mg/L	10	1.3	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	2.0	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.21	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.97	mg/L	0.25	0.050	EPA-353.2	ND	A07	7
Total Phosphate	0.36	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:12	02/27/19 20:11	JRG	PE-OP2	1	B038591
2	SM-2320B	02/22/19 12:00	02/22/19 14:57	MEV	MET-1	2	B031728
3	EPA-300.0	02/21/19 08:58	02/21/19 19:35	EMM	IC8	10	B038228
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	10	B038375
5	EPA-351.2	03/01/19 20:30	03/04/19 15:57	JMH	SC-1	1	B039117
6	EPA-350.1	03/07/19 12:52	03/08/19 11:28	JMH	SC-1	1	B039573
7	EPA-353.2	02/21/19 10:48	02/21/19 10:59	MC1	KONE-1	5	B038507
8	EPA-365.4	03/01/19 20:30	03/05/19 08:18	JMH	SC-1	1	B039118

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**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905549-08	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW8d, 2/20/2019 3:31:00PM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	41	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	640	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	6.0	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	1000	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	600	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	23	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	110	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2300	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.2	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.099	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.19	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.31	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:15	02/27/19 20:13	JRG	PE-OP2	1	B038591
2	SM-2320B	02/22/19 12:00	02/22/19 15:03	MEV	MET-1	2	B031728
3	EPA-300.0	02/21/19 08:58	02/21/19 19:55	EMM	IC8	5	B038228
4	SM-2540C	02/22/19 15:00	02/22/19 15:00	CAD	MANUAL	10	B038375
5	EPA-351.2	03/01/19 20:30	03/04/19 15:57	JMH	SC-1	1	B039117
6	EPA-350.1	03/07/19 12:52	03/08/19 11:29	JMH	SC-1	1	B039573
7	EPA-353.2	02/21/19 10:48	02/21/19 10:51	MC1	KONE-1	1	B038507
8	EPA-365.4	03/01/19 20:30	03/05/19 08:19	JMH	SC-1	1	B039118

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**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031727</b>						
Bicarbonate Alkalinity as CaCO3	B031727-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031727-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031727-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031728</b>						
Bicarbonate Alkalinity as CaCO3	B031728-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031728-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031728-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038228</b>						
Chloride	B038228-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B038228-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B038228-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B038375</b>						
Total Dissolved Solids @ 180 C	B038375-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038507</b>						
Nitrite as N	B038507-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038591</b>						
Dissolved Calcium	B038591-BLK1	0.017342	mg/L	0.10	0.016	J
Dissolved Magnesium	B038591-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038591-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038591-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039117</b>						
Total Kjeldahl Nitrogen	B039117-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039118</b>						
Total Phosphate	B039118-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039573</b>						
Ammonia as N	B039573-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038228</b>										
Chloride	B038228-BS1	LCS	52.424	50.000	mg/L	105		90 - 110		
Nitrate as N	B038228-BS1	LCS	5.1850	5.0000	mg/L	104		90 - 110		
Sulfate	B038228-BS1	LCS	103.45	100.00	mg/L	103		90 - 110		
<b>QC Batch ID: B038375</b>										
Total Dissolved Solids @ 180 C	B038375-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B038507</b>										
Nitrite as N	B038507-BS1	LCS	0.51972	0.50000	mg/L	104		90 - 110		
<b>QC Batch ID: B038591</b>										
Dissolved Calcium	B038591-BS1	LCS	10.550	10.000	mg/L	106		85 - 115		
Dissolved Magnesium	B038591-BS1	LCS	10.450	10.000	mg/L	104		85 - 115		
Dissolved Sodium	B038591-BS1	LCS	9.7379	10.000	mg/L	97.4		85 - 115		
Dissolved Potassium	B038591-BS1	LCS	8.9152	10.000	mg/L	89.2		85 - 115		
<b>QC Batch ID: B039117</b>										
Total Kjeldahl Nitrogen	B039117-BS1	LCS	1.8630	2.0000	mg/L	93.2		90 - 110		
<b>QC Batch ID: B039118</b>										
Total Phosphate	B039118-BS1	LCS	3.0825	3.0660	mg/L	101		85 - 115		
<b>QC Batch ID: B039573</b>										
Ammonia as N	B039573-BS1	LCS	0.96720	1.0000	mg/L	96.7		90 - 110		

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Reported: 03/08/2019 15:32
Project: Dairy Rep MP - Expanded Suite
Project Number: Albert Mendes Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC Batch IDs B031727, B031728, B038228, B038375, B038507, and B038591.

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**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits			
								Percent Recovery	RPD	Percent Recovery	Lab
<b>QC Batch ID: B039117</b>		Used client sample: Y - Description: MEN-MW1s, 02/20/2019 13:44									
Total Kjeldahl Nitrogen	DUP	1905549-01	4.3430	4.1615		mg/L	4.3		20		
	MS	1905549-01	4.3430	6.8660	2.0000	mg/L		126		90 - 110	Q03
	MSD	1905549-01	4.3430	6.6350	2.0000	mg/L	3.4	115	20	90 - 110	Q03
<b>QC Batch ID: B039118</b>		Used client sample: Y - Description: MEN-MW1s, 02/20/2019 13:44									
Total Phosphate	DUP	1905549-01	1.2746	1.2486		mg/L	2.1		20		
	MS	1905549-01	1.2746	4.2304	3.0660	mg/L		96.4		80 - 120	
	MSD	1905549-01	1.2746	4.1933	3.0660	mg/L	0.9	95.2	20	80 - 120	
<b>QC Batch ID: B039573</b>		Used client sample: Y - Description: MEN-MW3s, 02/20/2019 15:02									
Ammonia as N	DUP	1905549-03	0.25040	0.28300		mg/L	12.2		10		A02
	MS	1905549-03	0.25040	1.4347	1.1111	mg/L		107		90 - 110	
	MSD	1905549-03	0.25040	1.3866	1.1111	mg/L	3.4	102	10	90 - 110	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/08/2019 15:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 03/20/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Anchor J. Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1905973  
Invoice ID: B334152

Enclosed are the results of analyses for samples received by the laboratory on 2/25/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905973

Samples were filtered through a 0.45 micron filter for requested analysis.



BC Laboratories, Inc.		Chain of Custody					
19-05973		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911					
<b>Report to:</b> Expanded Constituent Suite							
Project: Dairy Representative Monitoring Program							
Site: Anchor J Dairy							
Samplers Name: ANIMO / Del-Tech							
Global ID - GADAIRY00002							
Name: Luidorff and Scalmani							
Address: 500 First Street							
City: Woodland							
State: 95695							
Attn: Till Angermann							
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ct, Pe Unpreserved	From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
-1	ANC-MW1	2/25/19	1522	bw	x	x	x
-2	ANC-MW2		1547		x	x	x
-3	ANC-MW3		1403		x	x	x
-4	ANC-MW4		1457		x	x	x
-5	ANC-MW5, ANC-MW5d		1433		x	x	x
-6	ANC-MW6s, ANC-MW6d		1341		x	x	x
-7	ANC-MW7s, ANC-MW7d		1318		x	x	x
-8	Field Duplicate #3				x	x	x
9							
10							
11							
12							

  

SHORT HOLDING TIME Cr+6 (NO <sub>2</sub> ) <input type="checkbox"/> BOD <input type="checkbox"/> MBAS <input type="checkbox"/> COT <input type="checkbox"/>	DISTRIBUTION WATER <input type="checkbox"/> SUB-OUT <input type="checkbox"/>
Relinquished by: (Signature) Arba H. Numb 2/25/19 1830	Received By: (Signature) [Signature] 2/25/19 18:30
Relinquished by: (Signature) [Signature]	Received by: (Signature) Guthrie 2/25/19 2215
Relinquished by: (Signature) [Signature]	Received by: (Signature) [Signature]

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luidorff and Scalmani Consulting Engineers via email: lsc@lscce.com, rlyson@lscce.com, pdhstwal@lscce.com.  
 4) Send invoices to Joannette Lovells (jlovels@lscce.com).

(A) = Analysis (C) = Container (P) = Preservative

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LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-05973

SHIPPING INFORMATION: Ex  UPS  Ontrac  Hand Delivery  Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Study Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

Samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/25 2015  
 Temperature: (A) 4.2 °C / (C) 4.5 °C Analyst Init: ENE

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
PE UNPRES	A	A	A	A	A	A	A	A		
8oz / 16oz PE UNPRES										
Cr <sup>6</sup>										
INORGANIC CHEMICAL METALS										
ORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
CYANIDE										
NITROGEN FORMS										
TOTAL SULFIDE										
NITRATE / NITRITE										
TOTAL ORGANIC CARBON										
CHEMICAL OXYGEN DEMAND										
PHENOLICS										
ml VOA VIAL TRAVEL BLANK										
ml VOA VIAL										
EPA 1664										
ODOR										
BIOLOGICAL										
CTERIOLOGICAL										
ml VOA VIAL- 504										
EPA 505/605/8050										
EPA 515.1/6150										
EPA 525										
EPA 525 TRAVEL BLANK										
ml EPA 547										
ml EPA 531.1										
α EPA 548										
EPA 549										
EPA 5015M										
EPA 8270										
α / 16oz / 32oz AMBER										
α / 16oz / 32oz JAR										
DIL SLEEVE										
CB VIAL										
LASTIC BAG										
EDLAR BAG										
FERRIOUS IRON										
NCORE										
WART KIT										
UMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: *ENE* Date/Time: 2-25-15 11:40 Rev 21 06/23/2016

= Actual / C = Corrected

[E:\WF\Bos\Wood\Perfect\LAB\_DOCS\FDMS\5\AMREC\rev 25]

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905973-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	02/25/2019 15:22
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905973-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	02/25/2019 15:47
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905973-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	02/25/2019 14:03
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905973-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	02/25/2019 14:57
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905973-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	02/25/2019 14:33
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW5d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1905973-06</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Anchor J. Dairy	<b>Sampling Date:</b> 02/25/2019 13:41
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ANC-MW6s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b> Groundwater

Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905973-07</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Anchor J. Dairy	<b>Sampling Date:</b> 02/25/2019 13:18
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ANC-MW7s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b> Groundwater

Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905973-08</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Anchor J. Dairy	<b>Sampling Date:</b> 02/25/2019 13:18
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Field Duplicate #3	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b> Groundwater

Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905973-01	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW1, 2/25/2019 3:22:00PM, Del-Tech/Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	160	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	74	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	350	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	8.5	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	1000	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	300	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	0.50	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	120	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.1	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.15	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.070	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.33	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:45	03/06/19 16:40	JRG	PE-OP2	1	B039077
2	SM-2320B	02/27/19 07:00	02/27/19 14:15	MEV	MET-1	2	B031747
3	EPA-300.0	02/26/19 10:00	02/26/19 16:18	EMM	IC5	2	B038677
4	SM-2540C	02/27/19 16:00	02/27/19 16:00	CAD	MANUAL	10	B038790
5	EPA-351.2	03/08/19 12:30	03/13/19 12:51	JMH	SC-1	1	B039768
6	EPA-350.1	03/13/19 12:39	03/15/19 09:06	JMH	SC-1	1	B040149
7	EPA-353.2	02/26/19 11:10	02/26/19 11:22	MC1	KONE-1	1	B038892
8	EPA-365.4	03/08/19 12:30	03/13/19 15:48	JMH	SC-1	1	B039769

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/20/2019 12:24  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Anchor J. Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905973-02	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW2, 2/25/2019 3:47:00PM, Del-Tech/Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	190	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	65	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	380	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	11	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	780	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	360	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	42	mg/L	0.50	0.10	EPA-300.0	ND	A07	4
Sulfate	250	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2100	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	1.7	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.18	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.64	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	3.3	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:50	03/06/19 16:53	JRG	PE-OP2	1	B039077
2	SM-2320B	02/27/19 07:00	02/27/19 14:22	MEV	MET-1	2	B031747
3	EPA-300.0	02/26/19 10:00	02/26/19 18:05	EMM	IC5	2	B038677
4	EPA-300.0	02/26/19 10:00	02/26/19 19:35	EMM	IC5	5	B038677
5	SM-2540C	02/27/19 16:00	02/27/19 16:00	CAD	MANUAL	10	B038790
6	EPA-351.2	03/08/19 12:30	03/13/19 12:53	JMH	SC-1	1	B039768
7	EPA-350.1	03/18/19 12:15	03/19/19 09:24	JMH	SC-1	1	B040568
8	EPA-353.2	02/26/19 11:10	02/26/19 11:22	MC1	KONE-1	1	B038892
9	EPA-365.4	03/08/19 12:30	03/13/19 15:48	JMH	SC-1	1	B039769

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905973-03	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW3, 2/25/2019 2:03:00PM, Del-Tech/Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	68	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	19	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	4.0	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	280	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	15	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	90	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	700	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.24	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.071	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.37	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:55	03/06/19 16:56	JRG	PE-OP2	1	B039077
2	SM-2320B	02/27/19 07:00	02/27/19 14:30	MEV	MET-1	2	B031747
3	EPA-300.0	02/26/19 10:00	02/26/19 18:23	EMM	IC5	1	B038677
4	SM-2540C	02/27/19 16:00	02/27/19 16:00	CAD	MANUAL	5	B038790
5	EPA-351.2	03/08/19 12:30	03/13/19 12:55	JMH	SC-1	1	B039768
6	EPA-350.1	03/18/19 12:15	03/19/19 09:27	JMH	SC-1	1	B040568
7	EPA-353.2	02/26/19 11:10	02/26/19 11:22	MC1	KONE-1	1	B038892
8	EPA-365.4	03/08/19 12:30	03/13/19 15:49	JMH	SC-1	1	B039769

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500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905973-04	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW4, 2/25/2019 2:57:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	82	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	29	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	5.6	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	220	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	68	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	57	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	96	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	940	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	ND	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.059	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.1	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 14:00	03/06/19 17:04	JRG	PE-OP2	1	B039077
2	SM-2320B	02/27/19 07:00	02/27/19 14:35	MEV	MET-1	2	B031747
3	EPA-300.0	02/26/19 10:00	02/26/19 13:37	SAV	IC5	5	B038677
4	SM-2540C	02/27/19 16:00	02/27/19 16:00	CAD	MANUAL	5	B038790
5	EPA-351.2	03/08/19 12:30	03/13/19 12:56	JMH	SC-1	1	B039768
6	EPA-350.1	03/18/19 12:15	03/19/19 09:29	JMH	SC-1	1	B040568
7	EPA-353.2	02/26/19 11:10	02/26/19 11:22	MC1	KONE-1	1	B038892
8	EPA-365.4	03/08/19 12:30	03/13/19 15:50	JMH	SC-1	1	B039769

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Reported: 03/20/2019 12:24  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Anchor J. Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905973-05		Client Sample Name: Anchor J. Dairy, ANC-MW5d, 2/25/2019 2:33:00PM, Del-Tech/Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	44	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	23	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	300	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.4	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	410	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	220	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	5.7	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	190	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.24	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.053	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.13	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.71	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 14:02	03/06/19 17:07	JRG	PE-OP2	1	B039077
2	SM-2320B	02/27/19 07:00	02/27/19 14:40	MEV	MET-1	2	B031747
3	EPA-300.0	02/26/19 10:00	02/26/19 18:41	EMM	IC5	2	B038677
4	SM-2540C	02/27/19 16:00	02/27/19 16:00	CAD	MANUAL	5	B038790
5	EPA-351.2	03/08/19 12:30	03/13/19 12:57	JMH	SC-1	1	B039768
6	EPA-350.1	03/18/19 12:15	03/19/19 09:31	JMH	SC-1	1	B040568
7	EPA-353.2	02/26/19 11:10	02/26/19 11:22	MC1	KONE-1	1	B038892
8	EPA-365.4	03/08/19 12:30	03/13/19 15:50	JMH	SC-1	1	B039769

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**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905973-06	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW6s, 2/25/2019 1:41:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	120	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	38	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	240	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	19	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	360	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	300	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	29	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	180	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.2	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.13	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.68	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	12	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 14:04	03/06/19 17:09	JRG	PE-OP2	1	B039077
2	SM-2320B	02/27/19 12:00	02/27/19 15:17	MEV	MET-1	2	B031748
3	EPA-300.0	02/26/19 10:00	02/26/19 18:59	EMM	IC5	2	B038677
4	SM-2540C	02/27/19 16:00	02/27/19 16:00	CAD	MANUAL	10	B038790
5	EPA-351.2	03/08/19 12:30	03/13/19 12:58	JMH	SC-1	1	B039768
6	EPA-350.1	03/18/19 12:15	03/19/19 09:33	JMH	SC-1	1	B040568
7	EPA-353.2	02/26/19 11:10	02/26/19 11:22	MC1	KONE-1	1	B038892
8	EPA-365.4	03/08/19 12:30	03/13/19 16:02	JMH	SC-1	5	B039769

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**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905973-07	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW7s, 2/25/2019 1:18:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	77	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	24	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	170	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.2	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	280	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	190	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	24	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	90	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	900	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.32	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.060	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.55	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 14:10	03/06/19 17:12	JRG	PE-OP2	1	B039077
2	SM-2320B	02/27/19 12:00	02/27/19 15:24	MEV	MET-1	2	B031748
3	EPA-300.0	02/26/19 10:00	02/26/19 19:17	EMM	IC5	2	B038677
4	SM-2540C	02/27/19 16:00	02/27/19 16:00	CAD	MANUAL	5	B038790
5	EPA-351.2	03/08/19 12:30	03/13/19 12:58	JMH	SC-1	1	B039768
6	EPA-350.1	03/18/19 12:15	03/19/19 09:33	JMH	SC-1	1	B040568
7	EPA-353.2	02/26/19 11:10	02/26/19 11:27	MC1	KONE-1	1	B038892
8	EPA-365.4	03/08/19 12:30	03/13/19 15:51	JMH	SC-1	1	B039769

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Reported: 03/20/2019 12:24  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Anchor J. Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905973-08	Client Sample Name:	Anchor J. Dairy, Field Duplicate #3, 2/25/2019 1:18:00PM, Del-Tech/Antonio Morales					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	83	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	29	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	5.5	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	220	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	68	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	57	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	96	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	930	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.22	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.062	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.1	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 14:12	03/06/19 17:15	JRG	PE-OP2	1	B039077
2	SM-2320B	02/27/19 12:00	02/27/19 15:29	MEV	MET-1	2	B031748
3	EPA-300.0	02/26/19 10:00	02/26/19 16:00	KEB	IC5	5	B038677
4	SM-2540C	02/27/19 16:00	02/27/19 16:00	CAD	MANUAL	5	B038790
5	EPA-351.2	03/08/19 12:30	03/13/19 13:00	JMH	SC-1	1	B039768
6	EPA-350.1	03/18/19 12:15	03/19/19 09:34	JMH	SC-1	1	B040568
7	EPA-353.2	02/26/19 11:10	02/26/19 11:27	MC1	KONE-1	1	B038892
8	EPA-365.4	03/08/19 12:30	03/13/19 15:52	JMH	SC-1	1	B039769

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**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031747</b>						
Bicarbonate Alkalinity as CaCO3	B031747-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031747-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031747-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031748</b>						
Bicarbonate Alkalinity as CaCO3	B031748-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031748-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031748-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038677</b>						
Chloride	B038677-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B038677-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B038677-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B038790</b>						
Total Dissolved Solids @ 180 C	B038790-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038892</b>						
Nitrite as N	B038892-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039077</b>						
Dissolved Calcium	B039077-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039077-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039077-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B039077-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039768</b>						
Total Kjeldahl Nitrogen	B039768-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039769</b>						
Total Phosphate	B039769-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040149</b>						
Ammonia as N	B040149-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B040568</b>						
Ammonia as N	B040568-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038677</b>										
Chloride	B038677-BS1	LCS	50.772	50.000	mg/L	102		90 - 110		
Nitrate as N	B038677-BS1	LCS	5.0270	5.0000	mg/L	101		90 - 110		
Sulfate	B038677-BS1	LCS	100.58	100.00	mg/L	101		90 - 110		
<b>QC Batch ID: B038790</b>										
Total Dissolved Solids @ 180 C	B038790-BS1	LCS	610.00	586.00	mg/L	104		90 - 110		
<b>QC Batch ID: B038892</b>										
Nitrite as N	B038892-BS1	LCS	0.48483	0.50000	mg/L	97.0		90 - 110		
<b>QC Batch ID: B039077</b>										
Dissolved Calcium	B039077-BS1	LCS	9.9685	10.000	mg/L	99.7		85 - 115		
Dissolved Magnesium	B039077-BS1	LCS	9.7653	10.000	mg/L	97.7		85 - 115		
Dissolved Sodium	B039077-BS1	LCS	9.0348	10.000	mg/L	90.3		85 - 115		
Dissolved Potassium	B039077-BS1	LCS	9.6304	10.000	mg/L	96.3		85 - 115		
<b>QC Batch ID: B039768</b>										
Total Kjeldahl Nitrogen	B039768-BS1	LCS	2.1054	2.0000	mg/L	105		90 - 110		
<b>QC Batch ID: B039769</b>										
Total Phosphate	B039769-BS1	LCS	3.0006	3.0660	mg/L	97.9		85 - 115		
<b>QC Batch ID: B040149</b>										
Ammonia as N	B040149-BS1	LCS	0.98060	1.0000	mg/L	98.1		90 - 110		
<b>QC Batch ID: B040568</b>										
Ammonia as N	B040568-BS1	LCS	0.90310	1.0000	mg/L	90.3		90 - 110		

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500 First Street
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Reported: 03/20/2019 12:24
Project: Dairy Rep MP - Expanded Suite
Project Number: Anchor J. Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes multiple QC batches (B031747, B031748, B038677, B038790, B038892, B039077) and various chemical constituents like Bicarbonate Alkalinity, Chloride, Nitrate, Sulfate, etc.

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**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B039768</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1906065-01	0.60480	0.59270		mg/L	2.0		20	
	MS	1906065-01	0.60480	2.6520	2.0000	mg/L		102		90 - 110
	MSD	1906065-01	0.60480	2.6623	2.0000	mg/L	0.4	103	20	90 - 110
<b>QC Batch ID: B039769</b>		Used client sample: N								
Total Phosphate	DUP	1906065-01	0.90545	0.97015		mg/L	6.9		20	
	MS	1906065-01	0.90545	3.8548	3.0660	mg/L		96.2		80 - 120
	MSD	1906065-01	0.90545	3.9511	3.0660	mg/L	2.5	99.3	20	80 - 120
<b>QC Batch ID: B040149</b>		Used client sample: N								
Ammonia as N	DUP	1906294-02	0.10650	0.10210		mg/L	4.2		10	J
	MS	1906294-02	0.10650	1.1822	1.1111	mg/L		96.8		90 - 110
	MSD	1906294-02	0.10650	1.2358	1.1111	mg/L	4.4	102	10	90 - 110
<b>QC Batch ID: B040568</b>		Used client sample: Y - Description: ANC-MW2, 02/25/2019 15:47								
Ammonia as N	DUP	1905973-02	0.18100	0.18680		mg/L	3.2		10	J
	MS	1905973-02	0.18100	1.3318	1.1111	mg/L		104		90 - 110
	MSD	1905973-02	0.18100	1.3328	1.1111	mg/L	0.1	104	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 12:24  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 03/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Bettencourt & Marson Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905683

Invoice ID: B333337

Enclosed are the results of analyses for samples received by the laboratory on 2/21/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905683

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		Chain of Custody						
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911								
<b>Report to:</b>								
Expanded Constituent Suite								
Project: Dairy Representative Monitoring Program								
Site: Bettencourt & Marson Dairy								
Samplers Name: Antonio Del-Tech								
Global ID - GADAIR700003								
Name: Luhdorff and Scalmanini								
Address: 500 First Street								
City: Woodland								
State: 95695								
CA: Till Angermann								
Attn: Global ID - GADAIR700003								
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ct Fe Unpreserved	From Filtered Sample: Ammonia-N, NO3-N, NO2-N	From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
-1	BET-MW1s, BET-MW1d	2/21/19	1318	ow	x	x	x	x
-2	BET-MW2s, BET-MW2d		1257		x	x	x	x
-3	BET-MW3s, BET-MW3d		1237		x	x	x	x
-4	BET-MW4s, BET-MW4d		1341		x	x	x	x
-5	BET-MW5s, BET-MW5d		1211		x	x	x	x
-6	BET-MW6s, BET-MW6d		1150		x	x	x	x
-7	BET-MW7s, BET-MW7d		1102		x	x	x	x
-8	BET-MW8s, BET-MW8d		1127		x	x	x	x
9	Field duplicate				x	x	x	x
10								
11								
12								
<b>Comments:</b>						Relinquished by: (Signature) <i>[Signature]</i> 1730		
1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.						Received by: <i>[Signature]</i> 2/21/19 17:30		
2) Lab reports shall identify sampled wells exactly as shown on this CoC.						Date & Time		
3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: lsc@lsc.com, roryson@lsc.com, pduhalwa@lsc.com,						Relinquished by: (Signature) <i>[Signature]</i> 2200		
4) Send invoices to Jeanette Lovells (jlovells@lsc.com).						Received by: <i>[Signature]</i> 2-21-19 2200		
(A)= Analysis (C)= Container (P)= Preservative						Date & Time		

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-05683

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received:  YES  NO

Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/21/2008

Temperature: (A) 2.3 °C / (C) 2.6 °C Analyst Init: ENR

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8180										
QT EPA 515.L/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

SHORT HOLDING TIME  
C-16 (NG) OP SS  
DD Cl<sub>2</sub> EOD MBAS COT

CHEK BY DISTRIBUTION  
INITIALS  
SUB-OUT

Comments: \_\_\_\_\_

Sample Numbering Completed By: ENR Date/Time: 2-21-09 2214 Rev 21 05/23/2016

A = Actual / C = Corrected

05://WPDcc/WordPerfect/LAE\_COCSFORMS/SAHREC/rev 201



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905683-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	02/21/2019 13:18
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905683-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	02/21/2019 12:57
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905683-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	02/21/2019 12:37
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905683-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	02/21/2019 13:41
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905683-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	02/21/2019 12:17
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905683-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	02/21/2019 11:50
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905683-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	02/21/2019 11:02
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905683-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	02/21/2019 11:27
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW8s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/12/2019 13:53  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Bettencourt & Marson Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905683-01		Client Sample Name: Bettencourt & Marson Dairy, BET-MW1s, 2/21/2019 1:18:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	120	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	37	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	49	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	21	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	100	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	71	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	110	mg/L	1.0	0.19	EPA-300.0	ND	A07	4
Sulfate	44	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.10	mg/L	0.20	0.036	EPA-351.2	ND	J	6
Ammonia as N	0.079	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	3.0	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:02	02/28/19 19:41	JRG	PE-OP2	1	B038594
2	SM-2320B	02/25/19 07:30	02/25/19 08:23	MEV	MET-1	2	B031732
3	EPA-300.0	02/22/19 08:00	02/22/19 10:16	SAV	IC8	5	B038367
4	EPA-300.0	02/22/19 08:00	02/22/19 19:30	KEB	IC8	10	B038367
5	SM-2540C	02/25/19 13:00	02/25/19 13:00	CAD	MANUAL	5	B038492
6	EPA-351.2	03/03/19 10:00	03/11/19 08:47	JMH	SC-1	1	B039140
7	EPA-350.1	03/11/19 12:30	03/12/19 09:43	JMH	SC-1	1	B039888
8	EPA-353.2	02/22/19 08:37	02/22/19 08:41	MC1	KONE-1	1	B038554
9	EPA-365.4	03/03/19 10:00	03/11/19 11:05	JMH	SC-1	1	B039141

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905683-02		<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW2s, 2/21/2019 12:57:00PM, Antonio Morales						
<b>Constituent</b>	<b>Result</b>	<b>Units</b>	<b>PQL</b>	<b>MDL</b>	<b>Method</b>	<b>MB Bias</b>	<b>Lab Quals</b>	<b>Run #</b>
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	38	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	64	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	92	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	320	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	270	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	5.2	mg/L	0.20	0.038	EPA-300.0	ND	A07	4
Sulfate	61	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		5
Total Kjeldahl Nitrogen	1.3	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.24	mg/L	0.20	0.050	EPA-350.1	ND		7
Nitrite as N	0.11	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	2.2	mg/L	0.15	0.050	EPA-365.4	ND		9

<b>Run #</b>	<b>Method</b>	<b>Prep Date</b>	<b>Run Date/Time</b>	<b>Analyst</b>	<b>Instrument</b>	<b>Dilution</b>	<b>QC Batch ID</b>
1	EPA-200.7	02/22/19 13:02	02/28/19 19:52	JRG	PE-OP2	1	B038594
2	SM-2320B	02/25/19 07:30	02/25/19 08:42	MEV	MET-1	2	B031732
3	EPA-300.0	02/22/19 08:00	02/22/19 11:38	SAV	IC8	2	B038367
4	EPA-300.0	02/22/19 08:00	02/22/19 20:52	EMM	IC8	2	B038367
5	SM-2540C	02/25/19 13:00	02/25/19 13:00	CAD	MANUAL	5	B038492
6	EPA-351.2	03/03/19 10:00	03/11/19 08:48	JMH	SC-1	1	B039140
7	EPA-350.1	03/11/19 12:30	03/12/19 09:44	JMH	SC-1	1	B039888
8	EPA-353.2	02/22/19 08:37	02/22/19 08:41	MC1	KONE-1	1	B038554
9	EPA-365.4	03/03/19 10:00	03/11/19 11:06	JMH	SC-1	1	B039141

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905683-03		Client Sample Name: Bettencourt & Marson Dairy, BET-MW3s, 2/21/2019 12:37:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	81	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	24	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	33	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	31	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	160	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	75	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	34	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	30	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	640	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.74	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.084	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.21	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	4.4	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:02	02/28/19 19:54	JRG	PE-OP2	1	B038594
2	SM-2320B	02/25/19 07:30	02/25/19 08:48	MEV	MET-1	1	B031732
3	EPA-300.0	02/22/19 08:00	02/22/19 21:54	KEB	IC8	2	B038367
4	SM-2540C	02/25/19 13:00	02/25/19 13:00	CAD	MANUAL	3.333	B038492
5	EPA-351.2	03/04/19 18:30	03/07/19 17:27	JMH	SC-1	1	B039285
6	EPA-350.1	03/11/19 12:30	03/12/19 09:45	JMH	SC-1	1	B039888
7	EPA-353.2	02/22/19 08:37	02/22/19 08:41	MC1	KONE-1	1	B038554
8	EPA-365.4	03/04/19 18:30	03/07/19 12:18	JMH	SC-1	1	B039286

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Woodland, CA 95695

Reported: 03/12/2019 13:53  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Bettencourt & Marson Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905683-04	Client Sample Name:	Bettencourt & Marson Dairy, BET-MW4s, 2/21/2019 1:41:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	ND		1	
Dissolved Magnesium	59	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	190	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	470	mg/L	1.0	0.10	EPA-200.7	ND		1	
Bicarbonate Alkalinity as CaCO3	600	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	440	mg/L	2.5	0.34	EPA-300.0	ND	A07	3	
Nitrate as N	61	mg/L	0.50	0.095	EPA-300.0	ND	A07	3	
Sulfate	190	mg/L	5.0	0.70	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	2200	mg/L	100	50	SM-2540C	ND		4	
Total Kjeldahl Nitrogen	2.7	mg/L	0.20	0.036	EPA-351.2	ND		5	
Ammonia as N	0.28	mg/L	0.20	0.050	EPA-350.1	ND		6	
Nitrite as N	0.46	mg/L	0.050	0.010	EPA-353.2	ND		7	
Total Phosphate	6.8	mg/L	0.75	0.25	EPA-365.4	ND	A07	8	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:06	02/28/19 20:02	JRG	PE-OP2	1	B038594
2	SM-2320B	02/25/19 07:30	02/25/19 08:54	MEV	MET-1	2	B031732
3	EPA-300.0	02/22/19 08:00	02/22/19 12:19	SAV	IC8	5	B038367
4	SM-2540C	02/25/19 13:00	02/25/19 13:00	CAD	MANUAL	10	B038492
5	EPA-351.2	03/04/19 18:30	03/07/19 17:30	JMH	SC-1	1	B039285
6	EPA-350.1	03/11/19 12:30	03/12/19 09:46	JMH	SC-1	1	B039888
7	EPA-353.2	02/22/19 08:37	02/22/19 08:41	MC1	KONE-1	1	B038554
8	EPA-365.4	03/04/19 18:30	03/07/19 13:01	JMH	SC-1	5	B039286

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**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905683-05		Client Sample Name: Bettencourt & Marson Dairy, BET-MW5s, 2/21/2019 12:17:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	64	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	21	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	34	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	11	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	64	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	25	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	51	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	35	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	580	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.56	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.076	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.0	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:08	02/28/19 20:05	JRG	PE-OP2	1	B038594
2	SM-2320B	02/25/19 07:30	02/25/19 09:02	MEV	MET-1	1	B031732
3	EPA-300.0	02/22/19 08:00	02/22/19 12:40	SAV	IC8	5	B038367
4	SM-2540C	02/25/19 13:00	02/25/19 13:00	CAD	MANUAL	3.333	B038492
5	EPA-351.2	03/04/19 18:30	03/07/19 17:32	JMH	SC-1	1	B039285
6	EPA-350.1	03/11/19 12:30	03/12/19 10:41	JMH	SC-1	1	B039889
7	EPA-353.2	02/22/19 08:37	02/22/19 09:24	MC1	KONE-1	1	B038555
8	EPA-365.4	03/04/19 18:30	03/07/19 12:21	JMH	SC-1	1	B039286

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**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905683-06		<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW6s, 2/21/2019 11:50:00AM, Antonio Morales						
<b>Constituent</b>	<b>Result</b>	<b>Units</b>	<b>PQL</b>	<b>MDL</b>	<b>Method</b>	<b>MB Bias</b>	<b>Lab Quals</b>	<b>Run #</b>
Dissolved Calcium	56	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	13	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	28	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	11	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	47	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	24	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	45	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	24	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	510	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.55	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.076	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	4.4	mg/L	0.15	0.050	EPA-365.4	ND		8

<b>Run #</b>	<b>Method</b>	<b>Prep Date</b>	<b>Run Date/Time</b>	<b>Analyst</b>	<b>Instrument</b>	<b>Dilution</b>	<b>QC Batch ID</b>
1	EPA-200.7	02/22/19 13:10	02/28/19 20:08	JRG	PE-OP2	1	B038594
2	SM-2320B	02/25/19 07:30	02/25/19 09:07	MEV	MET-1	1	B031732
3	EPA-300.0	02/22/19 08:00	02/22/19 13:41	SAV	IC8	5	B038367
4	SM-2540C	02/25/19 13:00	02/25/19 13:00	CAD	MANUAL	2	B038492
5	EPA-351.2	03/04/19 18:30	03/07/19 17:34	JMH	SC-1	1	B039285
6	EPA-350.1	03/11/19 12:30	03/12/19 10:44	JMH	SC-1	1	B039889
7	EPA-353.2	02/22/19 08:37	02/22/19 09:24	MC1	KONE-1	1	B038555
8	EPA-365.4	03/04/19 18:30	03/07/19 12:23	JMH	SC-1	1	B039286

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Reported: 03/12/2019 13:53  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Bettencourt & Marson Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905683-07	Client Sample Name:	Bettencourt & Marson Dairy, BET-MW7s, 2/21/2019 11:02:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	49	mg/L	0.10	0.016	EPA-200.7	ND		1	
Dissolved Magnesium	13	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	34	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	5.3	mg/L	1.0	0.10	EPA-200.7	ND		1	
Bicarbonate Alkalinity as CaCO3	55	mg/L	4.1	4.1	SM-2320B	ND		2	
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2	
Chloride	34	mg/L	1.0	0.13	EPA-300.0	ND	A07	3	
Nitrate as N	35	mg/L	0.20	0.038	EPA-300.0	ND	A07	3	
Sulfate	27	mg/L	2.0	0.28	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	460	mg/L	20	10	SM-2540C	ND		4	
Total Kjeldahl Nitrogen	0.58	mg/L	0.20	0.036	EPA-351.2	ND		5	
Ammonia as N	0.078	mg/L	0.20	0.050	EPA-350.1	ND	J	6	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7	
Total Phosphate	4.8	mg/L	0.15	0.050	EPA-365.4	ND		8	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:14	02/28/19 20:10	JRG	PE-OP2	1	B038594
2	SM-2320B	02/25/19 07:30	02/25/19 09:13	MEV	MET-1	1	B031732
3	EPA-300.0	02/22/19 08:00	02/22/19 22:14	KEB	IC8	2	B038367
4	SM-2540C	02/25/19 13:00	02/25/19 13:00	CAD	MANUAL	2	B038492
5	EPA-351.2	03/04/19 18:30	03/07/19 17:35	JMH	SC-1	1	B039285
6	EPA-350.1	03/11/19 12:30	03/12/19 10:46	JMH	SC-1	1	B039889
7	EPA-353.2	02/22/19 08:37	02/22/19 09:24	MC1	KONE-1	1	B038555
8	EPA-365.4	03/04/19 18:30	03/07/19 12:24	JMH	SC-1	1	B039286

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**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905683-08	<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW8s, 2/21/2019 11:27:00AM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	52	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	12	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	26	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	4.9	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	47	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	22	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	37	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	26	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	470	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.51	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.087	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	7.3	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:16	02/28/19 20:13	JRG	PE-OP2	1	B038594
2	SM-2320B	02/25/19 07:30	02/25/19 09:18	MEV	MET-1	1	B031732
3	EPA-300.0	02/22/19 08:00	02/22/19 14:22	SAV	IC8	2	B038367
4	SM-2540C	02/25/19 13:00	02/25/19 13:00	CAD	MANUAL	2	B038492
5	EPA-351.2	03/04/19 18:30	03/07/19 17:36	JMH	SC-1	1	B039285
6	EPA-350.1	03/11/19 12:30	03/12/19 10:46	JMH	SC-1	1	B039889
7	EPA-353.2	02/22/19 08:37	02/22/19 09:24	MC1	KONE-1	1	B038555
8	EPA-365.4	03/04/19 18:30	03/07/19 13:03	JMH	SC-1	5	B039286

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**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031732</b>						
Bicarbonate Alkalinity as CaCO3	B031732-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031732-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031732-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038367</b>						
Chloride	B038367-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038367-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038367-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038492</b>						
Total Dissolved Solids @ 180 C	B038492-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038554</b>						
Nitrite as N	B038554-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038555</b>						
Nitrite as N	B038555-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038594</b>						
Dissolved Calcium	B038594-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038594-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038594-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038594-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039140</b>						
Total Kjeldahl Nitrogen	B039140-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039141</b>						
Total Phosphate	B039141-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039285</b>						
Total Kjeldahl Nitrogen	B039285-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039286</b>						
Total Phosphate	B039286-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039888</b>						
Ammonia as N	B039888-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B039889</b>						
Ammonia as N	B039889-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038367</b>										
Chloride	B038367-BS1	LCS	52.844	50.000	mg/L	106		90 - 110		
Nitrate as N	B038367-BS1	LCS	5.2290	5.0000	mg/L	105		90 - 110		
Sulfate	B038367-BS1	LCS	103.47	100.00	mg/L	103		90 - 110		
<b>QC Batch ID: B038492</b>										
Total Dissolved Solids @ 180 C	B038492-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B038554</b>										
Nitrite as N	B038554-BS1	LCS	0.49100	0.50000	mg/L	98.2		90 - 110		
<b>QC Batch ID: B038555</b>										
Nitrite as N	B038555-BS1	LCS	0.49607	0.50000	mg/L	99.2		90 - 110		
<b>QC Batch ID: B038594</b>										
Dissolved Calcium	B038594-BS1	LCS	9.8595	10.000	mg/L	98.6		85 - 115		
Dissolved Magnesium	B038594-BS1	LCS	9.7287	10.000	mg/L	97.3		85 - 115		
Dissolved Sodium	B038594-BS1	LCS	9.0322	10.000	mg/L	90.3		85 - 115		
Dissolved Potassium	B038594-BS1	LCS	9.6021	10.000	mg/L	96.0		85 - 115		
<b>QC Batch ID: B039140</b>										
Total Kjeldahl Nitrogen	B039140-BS1	LCS	2.1376	2.0000	mg/L	107		90 - 110		
<b>QC Batch ID: B039141</b>										
Total Phosphate	B039141-BS1	LCS	3.0331	3.0660	mg/L	98.9		85 - 115		
<b>QC Batch ID: B039285</b>										
Total Kjeldahl Nitrogen	B039285-BS1	LCS	1.9577	2.0000	mg/L	97.9		90 - 110		
<b>QC Batch ID: B039286</b>										
Total Phosphate	B039286-BS1	LCS	3.2391	3.0660	mg/L	106		85 - 115		
<b>QC Batch ID: B039888</b>										
Ammonia as N	B039888-BS1	LCS	0.92260	1.0000	mg/L	92.3		90 - 110		
<b>QC Batch ID: B039889</b>										
Ammonia as N	B039889-BS1	LCS	0.93880	1.0000	mg/L	93.9		90 - 110		

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Reported: 03/12/2019 13:53
Project: Dairy Rep MP - Expanded Suite
Project Number: Bettencourt & Marson Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Qualls. Includes multiple QC batches (B031732, B038367, B038492, B038554, B038555, B038594) with various chemical tests like Bicarbonate Alkalinity, Chloride, Nitrate, Sulfate, etc.

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/12/2019 13:53  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Bettencourt & Marson Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B039140</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1905496-02	1.1143	1.0976		mg/L	1.5		20	
	MS	1905496-02	1.1143	3.1160	2.0000	mg/L		100		90 - 110
	MSD	1905496-02	1.1143	3.2777	2.0000	mg/L	5.1	108	20	90 - 110
<b>QC Batch ID: B039141</b>		Used client sample: N								
Total Phosphate	DUP	1905496-02	0.38481	0.35139		mg/L	9.1		20	
	MS	1905496-02	0.38481	3.5372	3.0660	mg/L		103		80 - 120
	MSD	1905496-02	0.38481	3.5261	3.0660	mg/L	0.3	102	20	80 - 120
<b>QC Batch ID: B039285</b>		Used client sample: Y - Description: BET-MW3s, 02/21/2019 12:37								
Total Kjeldahl Nitrogen	DUP	1905683-03	0.74310	0.73870		mg/L	0.6		20	
	MS	1905683-03	0.74310	2.9207	2.0000	mg/L		109		90 - 110
	MSD	1905683-03	0.74310	2.8167	2.0000	mg/L	3.6	104	20	90 - 110
<b>QC Batch ID: B039286</b>		Used client sample: Y - Description: BET-MW3s, 02/21/2019 12:37								
Total Phosphate	DUP	1905683-03	4.4389	4.4500		mg/L	0.2		20	
	MS	1905683-03	4.4389	7.5934	3.0660	mg/L		103		80 - 120
	MSD	1905683-03	4.4389	7.3337	3.0660	mg/L	3.5	94.4	20	80 - 120
<b>QC Batch ID: B039888</b>		Used client sample: N								
Ammonia as N	DUP	1905682-02	0.12500	0.12190		mg/L	2.5		10	J
	MS	1905682-02	0.12500	1.3184	1.1111	mg/L		107		90 - 110
	MSD	1905682-02	0.12500	1.2449	1.1111	mg/L	5.7	101	10	90 - 110
<b>QC Batch ID: B039889</b>		Used client sample: Y - Description: BET-MW5s, 02/21/2019 12:17								
Ammonia as N	DUP	1905683-05	0.075800	0.085200		mg/L	11.7		10	J,A02
	MS	1905683-05	0.075800	1.1508	1.1111	mg/L		96.7		90 - 110
	MSD	1905683-05	0.075800	1.1621	1.1111	mg/L	1.0	97.8	10	90 - 110

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500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:53  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 03/20/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Diepersloot Ranch

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905804

Invoice ID: B334142

Enclosed are the results of analyses for samples received by the laboratory on 2/22/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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### Quality Control Reports

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## Case Narratives

### Case Narrative for Work Order 1905804

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Chain of Custody								
Report to:				Analysis Requested								
Expanded Constituent Suite				From Filtered Sample:								
Project: Daily Representative Monitoring Program				From Filtered Sample:								
Site: Diepersloot Ranch 10CR2019				From Unfiltered Sample:								
Samplers Name: Antonio Del-Tech				Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3								
Global ID - WDR100039237				From Filtered Sample:								
Air Pe Unpreserved				Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids								
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	DO	CHL	BOD	MBAS	COT	SS	NO3	NO2
-1	DIE-MW1	2/22/19	1234	6W								
-2	DIE-MW2		1331									
-3	DIE-MW3		1302									
-4	DIE-MW4		1203									
-5	Field Duplicate #1											
6												
7												
8												
9												
10												
11												
12												

  

Relinquished by: (Signature) <i>[Signature]</i>	2/22/19 16:30	Date & Time
Relinquished by: (Signature) <i>[Signature]</i>	2-22-19 2000	Date & Time
Relinquished by: (Signature) <i>[Signature]</i>	2-22-19 2000	Date & Time

  

CHK BY: <i>[Signature]</i>	DISTRIBUTION
	SUB-OUT <input type="checkbox"/>

  

**Comments:**

- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Lufdorff and Scalimanni Consulting Engineers via email: llaveprino@lscce.com, rrtyson@lscce.com, pdhallival@lscce.com, jlovelis@lscce.com
- Send invoices to Jeanette Lovelis (jlovelis@lscce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-05804

<b>SHIPPING INFORMATION</b> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		<b>SHIPPING CONTAINER</b> Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____	<b>FREE LIQUID</b> YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
---	--	---	---

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/22/2000  
 Temperature: (A) 0.7 °C / (C) 1.0 °C Analyst Init: GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 502/609/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 5270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: EM Date/Time: 2-22-00 2030  
 A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 12:08  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905804-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/22/2019 20:00
	<b>Project Number:</b>	Diepersloot Ranch	<b>Sampling Date:</b>	02/22/2019 12:34
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DIE-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905804-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/22/2019 20:00
	<b>Project Number:</b>	Diepersloot Ranch	<b>Sampling Date:</b>	02/22/2019 13:31
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DIE-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905804-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/22/2019 20:00
	<b>Project Number:</b>	Diepersloot Ranch	<b>Sampling Date:</b>	02/22/2019 13:02
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DIE-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905804-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/22/2019 20:00
	<b>Project Number:</b>	Diepersloot Ranch	<b>Sampling Date:</b>	02/22/2019 12:03
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DIE-MW4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905804-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/22/2019 20:00
	<b>Project Number:</b>	Diepersloot Ranch	<b>Sampling Date:</b>	02/22/2019 12:03
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate #4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 03/20/2019 12:08  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905804-01		Client Sample Name: Diepersloot Ranch, DIE-MW1, 2/22/2019 12:34:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	200	mg/L	0.10	0.016	EPA-200.7	0.016		1
Dissolved Magnesium	78	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	85	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	4.4	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	490	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	85	mg/L	5.0	0.77	EPA-300.0	ND	A07	3
Nitrate as N	100	mg/L	1.0	0.21	EPA-300.0	ND	A07	3
Sulfate	90	mg/L	10	1.3	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.45	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.13	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.061	mg/L	0.15	0.050	EPA-365.4	ND	J	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 09:00	03/11/19 14:35	JRG	PE-OP2	1	B039633
2	SM-2320B	02/26/19 07:00	02/26/19 11:23	MEV	MET-1	2	B031741
3	EPA-300.0	02/22/19 23:30	02/23/19 01:28	EMM	IC8	10	B038468
4	SM-2540C	02/27/19 15:00	02/27/19 15:00	CAD	MANUAL	5	B038767
5	EPA-351.2	03/05/19 20:30	03/07/19 08:28	JMH	SC-1	1	B039417
6	EPA-350.1	03/13/19 10:30	03/14/19 09:26	JMH	SC-1	1	B040031
7	EPA-353.2	02/22/19 23:00	02/22/19 23:00	KEB	KONE-1	1	B038558
8	EPA-365.4	03/05/19 20:30	03/06/19 12:44	JMH	SC-1	1	B039418

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500 First Street  
Woodland, CA 95695

Reported: 03/20/2019 12:08  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Diepersloot Ranch  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905804-02	<b>Client Sample Name:</b> Diepersloot Ranch, DIE-MW2, 2/22/2019 1:31:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	83	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	26	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.8	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	410	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	70	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	14	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	22	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	590	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.12	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	0.051	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.11	mg/L	0.15	0.050	EPA-365.4	ND	J	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/25/19 13:44	03/01/19 19:04	JRG	PE-OP2	1	B039075
2	SM-2320B	02/26/19 07:00	02/26/19 13:17	MEV	MET-1	1	B031742
3	EPA-300.0	02/22/19 23:30	02/23/19 01:08	EMM	IC8	1	B038468
4	SM-2540C	02/27/19 15:00	02/27/19 15:00	CAD	MANUAL	3.333	B038767
5	EPA-351.2	03/17/19 17:00	03/18/19 12:03	JMH	SC-1	1	B040530
6	EPA-350.1	03/18/19 12:10	03/19/19 08:55	JMH	SC-1	1	B040566
7	EPA-353.2	02/22/19 23:00	02/22/19 23:00	KEB	KONE-1	1	B038558
8	EPA-365.4	03/05/19 20:30	03/06/19 12:47	JMH	SC-1	1	B039418

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/20/2019 12:08  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Diepersloot Ranch  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905804-03		Client Sample Name: Diepersloot Ranch, DIE-MW3, 2/22/2019 1:02:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	170	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	57	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	120	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	7.4	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	590	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	34	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	38	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	920	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.21	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.11	mg/L	0.40	0.10	EPA-350.1	ND	J,A07	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.23	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/25/19 13:48	03/01/19 19:07	JRG	PE-OP2	1	B039075
2	SM-2320B	02/26/19 07:00	02/26/19 13:24	MEV	MET-1	2	B031742
3	EPA-300.0	02/22/19 23:30	02/23/19 01:49	EMM	IC8	5	B038468
4	SM-2540C	02/27/19 15:00	02/27/19 15:00	CAD	MANUAL	5	B038767
5	EPA-351.2	03/17/19 17:00	03/18/19 12:05	JMH	SC-1	1	B040530
6	EPA-350.1	03/18/19 12:10	03/19/19 08:57	JMH	SC-1	2	B040566
7	EPA-353.2	02/22/19 23:00	02/22/19 23:00	KEB	KONE-1	1	B038558
8	EPA-365.4	03/05/19 20:30	03/06/19 12:48	JMH	SC-1	1	B039418

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/20/2019 12:08  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Diepersloot Ranch  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905804-04	<b>Client Sample Name:</b> Diepersloot Ranch, DIE-MW4, 2/22/2019 12:03:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	170	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	46	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	81	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.8	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	460	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	85	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	27	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	90	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	770	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.78	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.28	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	9.1	mg/L	0.75	0.25	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/25/19 13:50	03/01/19 19:15	JRG	PE-OP2	1	B039075
2	SM-2320B	02/26/19 07:00	02/26/19 13:30	MEV	MET-1	2	B031742
3	EPA-300.0	02/22/19 23:30	02/23/19 02:09	EMM	IC8	2	B038468
4	SM-2540C	02/27/19 15:00	02/27/19 15:00	CAD	MANUAL	5	B038767
5	EPA-351.2	03/05/19 20:30	03/07/19 08:35	JMH	SC-1	1	B039417
6	EPA-350.1	03/12/19 13:00	03/14/19 08:50	JMH	SC-1	1	B040032
7	EPA-353.2	02/22/19 23:00	02/22/19 23:00	KEB	KONE-1	1	B038558
8	EPA-365.4	03/05/19 20:30	03/06/19 13:04	JMH	SC-1	5	B039418

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 12:08  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905804-05		Client Sample Name: Diepersloot Ranch, Field Duplicate #4, 2/22/2019 12:03:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	170	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	56	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	120	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	7.3	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	590	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	120	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	33	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	40	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	920	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.088	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	0.098	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.39	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/25/19 13:52	03/01/19 19:18	JRG	PE-OP2	1	B039075
2	SM-2320B	02/26/19 07:00	02/26/19 13:36	MEV	MET-1	2	B031742
3	EPA-300.0	02/22/19 23:30	02/23/19 02:30	EMM	IC8	2	B038468
4	SM-2540C	02/27/19 15:00	02/27/19 15:00	CAD	MANUAL	5	B038767
5	EPA-351.2	03/05/19 20:30	03/07/19 08:36	JMH	SC-1	1	B039417
6	EPA-350.1	03/12/19 13:00	03/14/19 08:53	JMH	SC-1	1	B040032
7	EPA-353.2	02/22/19 23:00	02/22/19 23:00	KEB	KONE-1	1	B038558
8	EPA-365.4	03/05/19 20:30	03/06/19 12:49	JMH	SC-1	1	B039418

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**Reported:** 03/20/2019 12:08  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031741</b>						
Bicarbonate Alkalinity as CaCO3	B031741-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031741-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031741-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031742</b>						
Bicarbonate Alkalinity as CaCO3	B031742-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031742-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031742-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038468</b>						
Chloride	B038468-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B038468-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B038468-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B038558</b>						
Nitrite as N	B038558-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038767</b>						
Total Dissolved Solids @ 180 C	B038767-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B039075</b>						
Dissolved Calcium	B039075-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039075-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039075-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B039075-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039417</b>						
Total Kjeldahl Nitrogen	B039417-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039418</b>						
Total Phosphate	B039418-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039633</b>						
Dissolved Calcium	B039633-BLK1	0.016330	mg/L	0.10	0.016	J
Dissolved Magnesium	B039633-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039633-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B039633-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B040031</b>						

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**Reported:** 03/20/2019 12:08  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B040031</b>						
Ammonia as N	B040031-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B040032</b>						
Ammonia as N	B040032-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B040530</b>						
Total Kjeldahl Nitrogen	B040530-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040566</b>						
Ammonia as N	B040566-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/20/2019 12:08  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038468</b>										
Chloride	B038468-BS1	LCS	49.882	50.000	mg/L	99.8		90 - 110		
Nitrate as N	B038468-BS1	LCS	4.9800	5.0000	mg/L	99.6		90 - 110		
Sulfate	B038468-BS1	LCS	98.034	100.00	mg/L	98.0		90 - 110		
<b>QC Batch ID: B038558</b>										
Nitrite as N	B038558-BS1	LCS	0.49331	0.50000	mg/L	98.7		90 - 110		
<b>QC Batch ID: B038767</b>										
Total Dissolved Solids @ 180 C	B038767-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B039075</b>										
Dissolved Calcium	B039075-BS1	LCS	10.546	10.000	mg/L	105		85 - 115		
Dissolved Magnesium	B039075-BS1	LCS	10.310	10.000	mg/L	103		85 - 115		
Dissolved Sodium	B039075-BS1	LCS	9.5243	10.000	mg/L	95.2		85 - 115		
Dissolved Potassium	B039075-BS1	LCS	9.3558	10.000	mg/L	93.6		85 - 115		
<b>QC Batch ID: B039417</b>										
Total Kjeldahl Nitrogen	B039417-BS1	LCS	2.0328	2.0000	mg/L	102		90 - 110		
<b>QC Batch ID: B039418</b>										
Total Phosphate	B039418-BS1	LCS	3.1171	3.0660	mg/L	102		85 - 115		
<b>QC Batch ID: B039633</b>										
Dissolved Calcium	B039633-BS1	LCS	10.124	10.000	mg/L	101		85 - 115		
Dissolved Magnesium	B039633-BS1	LCS	10.047	10.000	mg/L	100		85 - 115		
Dissolved Sodium	B039633-BS1	LCS	9.2689	10.000	mg/L	92.7		85 - 115		
Dissolved Potassium	B039633-BS1	LCS	9.2607	10.000	mg/L	92.6		85 - 115		
<b>QC Batch ID: B040031</b>										
Ammonia as N	B040031-BS1	LCS	1.0186	1.0000	mg/L	102		90 - 110		
<b>QC Batch ID: B040032</b>										
Ammonia as N	B040032-BS1	LCS	0.98990	1.0000	mg/L	99.0		90 - 110		
<b>QC Batch ID: B040530</b>										
Total Kjeldahl Nitrogen	B040530-BS1	LCS	1.8951	2.0000	mg/L	94.8		90 - 110		
<b>QC Batch ID: B040566</b>										
Ammonia as N	B040566-BS1	LCS	0.96570	1.0000	mg/L	96.6		90 - 110		

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Woodland, CA 95695

Reported: 03/20/2019 12:08  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Diepersloot Ranch  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B031741</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1905804-01	492.00	490.78		mg/L	0.2		10	
Carbonate Alkalinity as CaCO3	DUP	1905804-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1905804-01	ND	ND		mg/L			10	
<b>QC Batch ID: B031742</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1905805-03	264.41	265.32		mg/L	0.3		10	
Carbonate Alkalinity as CaCO3	DUP	1905805-03	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1905805-03	ND	ND		mg/L			10	
<b>QC Batch ID: B038468</b>		Used client sample: Y - Description: DIE-MW2, 02/22/2019 13:31								
Chloride	DUP	1905804-02	70.091	70.572		mg/L	0.7		10	
	MS	1905804-02	70.091	122.49	50.505	mg/L		104		80 - 120
	MSD	1905804-02	70.091	122.54	50.505	mg/L	0.0	104	10	80 - 120
Nitrate as N	DUP	1905804-02	14.098	14.289		mg/L	1.3		10	
	MS	1905804-02	14.098	19.122	5.0505	mg/L		99.5		80 - 120
	MSD	1905804-02	14.098	19.067	5.0505	mg/L	0.3	98.4	10	80 - 120
Sulfate	DUP	1905804-02	21.582	21.769		mg/L	0.9		10	
	MS	1905804-02	21.582	126.63	101.01	mg/L		104		80 - 120
	MSD	1905804-02	21.582	126.12	101.01	mg/L	0.4	103	10	80 - 120
<b>QC Batch ID: B038558</b>		Used client sample: Y - Description: DIE-MW1, 02/22/2019 12:34								
Nitrite as N	DUP	1905804-01	ND	ND		mg/L			10	
	MS	1905804-01	ND	0.52007	0.52632	mg/L		98.8		90 - 110
	MSD	1905804-01	ND	0.52594	0.52632	mg/L	1.1	99.9	10	90 - 110
<b>QC Batch ID: B038767</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1905804-01	1375.0	1350.0		mg/L	1.8		10	
<b>QC Batch ID: B039075</b>		Used client sample: Y - Description: DIE-MW1, 02/22/2019 12:34								
Dissolved Calcium	DUP	1905804-01	243.24	244.91		mg/L	0.7		20	
	MS	1905804-01	243.24	246.05	10.204	mg/L		27.5		85 - 115 A03
	MSD	1905804-01	243.24	246.67	10.204	mg/L	0.3	33.6	20	85 - 115 A03
Dissolved Magnesium	DUP	1905804-01	83.719	83.183		mg/L	0.6		20	
	MS	1905804-01	83.719	92.819	10.204	mg/L		89.2		85 - 115
	MSD	1905804-01	83.719	91.898	10.204	mg/L	1.0	80.2	20	85 - 115 A03
Dissolved Sodium	DUP	1905804-01	120.44	121.26		mg/L	0.7		20	
	MS	1905804-01	120.44	127.57	10.204	mg/L		69.9		85 - 115 A03
	MSD	1905804-01	120.44	126.87	10.204	mg/L	0.6	63.0	20	85 - 115 A03
Dissolved Potassium	DUP	1905804-01	4.8680	4.9184		mg/L	1.0		20	
	MS	1905804-01	4.8680	15.273	10.204	mg/L		102		85 - 115
	MSD	1905804-01	4.8680	15.308	10.204	mg/L	0.2	102	20	85 - 115

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500 First Street  
Woodland, CA 95695

Reported: 03/20/2019 12:08  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Diepersloot Ranch  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B039417</b>		Used client sample: Y - Description: DIE-MW1, 02/22/2019 12:34								
Total Kjeldahl Nitrogen	DUP	1905804-01	0.44960	0.58880		mg/L	26.8		20	A02
	MS	1905804-01	0.44960	1.6874	2.0000	mg/L		61.9	90 - 110	Q03
	MSD	1905804-01	0.44960	1.6795	2.0000	mg/L	0.5	61.5	20 90 - 110	Q03
<b>QC Batch ID: B039418</b>		Used client sample: Y - Description: DIE-MW1, 02/22/2019 12:34								
Total Phosphate	DUP	1905804-01	0.061324	0.18612		mg/L	101		20	A02
	MS	1905804-01	0.061324	3.0426	3.0660	mg/L		97.2	80 - 120	
	MSD	1905804-01	0.061324	3.2207	3.0660	mg/L	5.7	103	20 80 - 120	
<b>QC Batch ID: B039633</b>		Used client sample: N								
Dissolved Calcium	DUP	905244-01RE'	23.982	22.715		mg/L	5.4		20	
	MS	905244-01RE'	23.982	35.037	10.204	mg/L		108	85 - 115	
	MSD	905244-01RE'	23.982	34.847	10.204	mg/L	0.5	106	20 85 - 115	
Dissolved Magnesium	DUP	905244-01RE'	13.886	13.511		mg/L	2.7		20	
	MS	905244-01RE'	13.886	24.478	10.204	mg/L		104	85 - 115	
	MSD	905244-01RE'	13.886	25.091	10.204	mg/L	2.5	110	20 85 - 115	
Dissolved Sodium	DUP	1905244-01RE1	52.196	49.751		mg/L	4.8		20	
	MS	1905244-01RE1	52.196	64.070	10.204	mg/L		116	85 - 115	A03
	MSD	1905244-01RE1	52.196	63.256	10.204	mg/L	1.3	108	20 85 - 115	
Dissolved Potassium	DUP	905244-01RE'	3.5659	3.4284		mg/L	3.9		20	
	MS	905244-01RE'	3.5659	13.952	10.204	mg/L		102	85 - 115	
	MSD	905244-01RE'	3.5659	13.663	10.204	mg/L	2.1	99.0	20 85 - 115	
<b>QC Batch ID: B040031</b>		Used client sample: Y - Description: DIE-MW1, 02/22/2019 12:34								
Ammonia as N	DUP	1905804-01	0.13130	0.11960		mg/L	9.3		10	J
	MS	1905804-01	0.13130	1.1887	1.1111	mg/L		95.2	90 - 110	
	MSD	1905804-01	0.13130	1.2656	1.1111	mg/L	6.3	102	10 90 - 110	
<b>QC Batch ID: B040032</b>		Used client sample: Y - Description: DIE-MW4, 02/22/2019 12:03								
Ammonia as N	DUP	1905804-04	0.27860	0.28400		mg/L	1.9		10	
	MS	1905804-04	0.27860	1.2666	1.1111	mg/L		88.9	90 - 110	Q03
	MSD	1905804-04	0.27860	1.2824	1.1111	mg/L	1.2	90.3	10 90 - 110	
<b>QC Batch ID: B040530</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1906909-02	0.83280	0.86250		mg/L	3.5		20	
	MS	1906909-02	0.83280	2.9402	2.0000	mg/L		105	90 - 110	
	MSD	1906909-02	0.83280	2.8558	2.0000	mg/L	2.9	101	20 90 - 110	
<b>QC Batch ID: B040566</b>		Used client sample: N								
Ammonia as N	DUP	1906262-01	0.12840	0.11670		mg/L	9.5		10	J
	MS	1906262-01	0.12840	1.2103	1.1111	mg/L		97.4	90 - 110	
	MSD	1906262-01	0.12840	1.3021	1.1111	mg/L	7.3	106	10 90 - 110	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 12:08  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.

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Date of Report: 03/18/2019

Till Angermann

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500 First Street  
Woodland, CA 95695

Client Project: Durrer Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1905316  
Invoice ID: B333808

Enclosed are the results of analyses for samples received by the laboratory on 2/19/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000863040

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905316

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.

### Chain of Custody

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

### Analysis Requested

From Unfiltered Sample:  
Total Kjeldahl Nitrogen,  
Total Phosphate (as PO<sub>4</sub>),  
Alkalinity (HCO<sub>3</sub>, CO<sub>3</sub> & OH) as  
CaCO<sub>3</sub>

From Filtered Sample:  
Na, K, Mg, Ca, Cl,  
SO<sub>4</sub> (as SO<sub>4</sub>),  
Total Dissolved Solids

From Filtered Sample:  
Ammonia-N, NO<sub>3</sub>-N,  
NO<sub>2</sub>-N

---

### BC Laboratories, Inc.

19-05316

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

### Report to:

Expanded Constituent Suite

Project: Dairy Representative Monitoring Program

Site: Durrer Dairy 10+2019

Samplers Name: Antonio Del-Tern

Global ID - WDR100038158

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	GI Pe	
					Unpreserved	
- 1	DUR-MW1	2/19/19	1007	GW		x
- 2	DUR-MW2		942			x
- 3	DUR-MW3		1057			x
- 4	DUR-MW4		1032			x
- 5	DUR-MW6		1202			x
- 6	DUR-MW7		1237			x
- 7	DUR-MW8		1218			x
- 8	DUR-MW9		1257			x
- 9	<del>DUR-MW10</del>					x
- 10	Field Duplicate #1		1136			x
11						
12						
13						

Relinquished by: (Signature) [Signature]

Relinquished by: (Signature) [Signature]

Relinquished by: (Signature) [Signature]

Date & Time: 2/19/19 17:40

Date & Time: 2/19/19 22:00

Date & Time: 2/19/19 22:00

**Comments:**

1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.

2) Lab reports shall identify sampled wells exactly as shown on this CoC.

3) Send lab reports to Luhdorff and Scalimanni Consulting Engineers via email: llavagnina@lscce.com, fryson@lscce.com, pdhallives@lscce.com, jlovells@lscce.com

4) Send invoices to Jeanette Lovells (jlovells@lscce.com).

(A)= Analysis

(C)= Container

(P)= Preservative



# Laboratories, Inc.

Environmental Testing Laboratory Since 1949

## Chain of Custody and Cooler Receipt Form for 1905316 Page 2 of 2

BC LABORATORIES INC.		COOLER RECEIPT FORM		Page 1 Of 1	
Submission #: <u>19-05316</u>					
SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____			SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments: _____					
Custody Seals: Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments: _____ Intact? Yes <input type="checkbox"/> No <input type="checkbox"/> Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>					
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.98</u> Container: <u>PE</u> Thermometer ID: <u>208</u>		Date/Time <u>2/19/2008</u>	
		Temperature: (A) <u>2.0</u> °C / (C) <u>2.5</u> °C		Analyst Init <u>ENK</u>	
SAMPLE CONTAINERS			SAMPLE NUMBERS		
QT PE UNPRES			A A A A A A A A A A		
4oz / 8oz / 16oz PE UNPRES					
2oz Cr <sup>4</sup>					
QT INORGANIC CHEMICAL METALS					
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz					
PT CYANIDE					
PT NITROGEN FORMS					
PT TOTAL SULFIDE					
2oz. NITRATE / NITRITE					
PT TOTAL ORGANIC CARBON					
PT CHEMICAL OXYGEN DEMAND					
PIA PHENOLICS					
40ml VOA VIAL TRAVEL BLANK					
40ml VOA VIAL					
QT EPA 1664					
PT ODOR					
RADIOLOGICAL					
BACTERIOLOGICAL					
40 ml VOA VIAL - 504					
QT EPA 508/608/3080					
QT EPA 515.1/8150					
QT EPA 525					
QT EPA 525 TRAVEL BLANK					
40ml EPA 547					
40ml EPA 531.1					
8oz EPA 548					
QT EPA 549					
QT EPA 8015M					
QT EPA 8270					
8oz / 16oz / 32oz AMBER					
8oz / 16oz / 32oz JAR					
SOIL SLEEVE					
PCB VIAL					
PLASTIC BAG					
TEDLAR BAG					
FERROUS IRON					
ENCORE					
SMART KIT					
SUMMA CANISTER					

SHORT HOLDING TIME  
 0-18 MO (NO)  
 0-30 MEAS COT  
 DO NOT MEAS COT

CHECK BY  
 DISTRIBUTION  
 INTAKE  
 SUB-OUT

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: ENK Date/Time: 2-19-08 2230 Rev 21 05/23/2016  
 A = Actual / C = Corrected

(S:\WP\Doc\WordPerfect\LAB\_DOC\SI\FORMS\SIANRECrev 20)

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905316-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	02/19/2019 10:02
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905316-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	02/19/2019 09:42
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905316-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	02/19/2019 10:52
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905316-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	02/19/2019 10:32
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905316-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	02/19/2019 12:02
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW6	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905316-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	02/19/2019 12:37
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW7	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905316-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	02/19/2019 12:18
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW8	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905316-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	02/19/2019 12:57
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW9	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905316-09	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	02/19/2019 11:36
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW10d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905316-10	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	02/19/2019 13:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate #1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905316-01	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW1, 2/19/2019 10:02:00AM, Del-Tech/Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	180	mg/L	0.10	0.016	EPA-200.7	0.019		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	0.11		1
Dissolved Potassium	3.2	mg/L	1.0	0.10	EPA-200.7	0.13		1
Bicarbonate Alkalinity as CaCO3	530	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	100	mg/L	5.0	0.67	EPA-300.0	ND	A07	3
Nitrate as N	110	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	95	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	ND	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	2.8	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:15	02/26/19 19:37	JRG	PE-OP2	1	B038580
2	SM-2320B	02/21/19 14:00	02/21/19 17:05	MEV	MET-1	2	B031722
3	EPA-300.0	02/20/19 15:00	02/20/19 16:58	EMM	IC5	10	B038174
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	10	B038360
5	EPA-351.2	02/28/19 20:30	03/04/19 11:36	JMH	SC-1	1	B038990
6	EPA-350.1	03/06/19 12:43	03/07/19 10:51	JMH	SC-1	1	B039437
7	EPA-353.2	02/20/19 10:21	02/20/19 10:21	MC1	KONE-1	1	B038400
8	EPA-365.4	02/28/19 20:30	03/04/19 13:50	JMH	SC-1	1	B038991

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500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905316-02	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW2, 2/19/2019 9:42:00AM, Del-Tech/Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	110	mg/L	0.10	0.016	EPA-200.7	0.019		1
Dissolved Magnesium	95	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	220	mg/L	0.50	0.051	EPA-200.7	0.11		1
Dissolved Potassium	230	mg/L	1.0	0.10	EPA-200.7	0.13		1
Bicarbonate Alkalinity as CaCO3	1100	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	290	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	18	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	150	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	110	mg/L	20	3.6	EPA-351.2	ND	A07	5
Ammonia as N	0.35	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.018	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	5.3	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:20	02/26/19 19:50	JRG	PE-OP2	1	B038580
2	SM-2320B	02/21/19 14:00	02/21/19 17:11	MEV	MET-1	2	B031722
3	EPA-300.0	02/20/19 15:00	02/20/19 18:10	EMM	IC5	2	B038174
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	10	B038360
5	EPA-351.2	02/28/19 20:30	03/04/19 13:00	JMH	SC-1	100	B038990
6	EPA-350.1	03/06/19 12:43	03/07/19 10:55	JMH	SC-1	1	B039437
7	EPA-353.2	02/20/19 10:21	02/20/19 10:44	MC1	KONE-1	1	B038400
8	EPA-365.4	02/28/19 20:30	03/04/19 13:52	JMH	SC-1	1	B038991

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500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905316-03	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW3, 2/19/2019 10:52:00AM, Del-Tech/Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	0.019		1
Dissolved Magnesium	81	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	190	mg/L	0.50	0.051	EPA-200.7	0.11		1
Dissolved Potassium	190	mg/L	1.0	0.10	EPA-200.7	0.13		1
Bicarbonate Alkalinity as CaCO3	900	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	170	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	20	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	84	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	7.0	mg/L	1.0	0.18	EPA-351.2	ND	A07	5
Ammonia as N	1.4	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	2.1	mg/L	0.25	0.050	EPA-353.2	ND	A07	7
Total Phosphate	9.3	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:25	02/26/19 19:53	JRG	PE-OP2	1	B038580
2	SM-2320B	02/21/19 14:00	02/21/19 17:18	MEV	MET-1	2	B031722
3	EPA-300.0	02/20/19 15:00	02/20/19 21:49	KEB	IC5	2	B038174
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	10	B038360
5	EPA-351.2	02/28/19 20:30	03/04/19 12:20	JMH	SC-1	5	B038990
6	EPA-350.1	03/06/19 12:43	03/07/19 10:55	JMH	SC-1	1	B039437
7	EPA-353.2	02/20/19 10:21	02/20/19 10:29	MC1	KONE-1	5	B038400
8	EPA-365.4	02/28/19 20:30	03/04/19 14:14	JMH	SC-1	5	B038991

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500 First Street  
Woodland, CA 95695

Reported: 03/18/2019 12:31  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Durrer Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905316-04	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW4, 2/19/2019 10:32:00AM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	250	mg/L	0.10	0.016	EPA-200.7	0.019		1
Dissolved Magnesium	170	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	240	mg/L	0.50	0.051	EPA-200.7	0.11		1
Dissolved Potassium	180	mg/L	1.0	0.10	EPA-200.7	0.13		1
Bicarbonate Alkalinity as CaCO3	1300	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	230	mg/L	5.0	0.67	EPA-300.0	ND	A07	3
Nitrate as N	100	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	260	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2800	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	54	mg/L	5.0	0.90	EPA-351.2	ND	A07	5
Ammonia as N	62	mg/L	10	2.5	EPA-350.1	ND	A07	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	7.5	mg/L	0.75	0.25	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:30	02/26/19 20:01	JRG	PE-OP2	1	B038580
2	SM-2320B	02/21/19 14:00	02/21/19 17:25	MEV	MET-1	2	B031722
3	EPA-300.0	02/20/19 15:00	02/20/19 18:46	EMM	IC5	10	B038174
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	10	B038360
5	EPA-351.2	02/28/19 20:30	03/04/19 12:22	JMH	SC-1	25	B038990
6	EPA-350.1	03/06/19 12:43	03/07/19 11:02	JMH	SC-1	50	B039440
7	EPA-353.2	02/20/19 10:21	02/20/19 10:25	MC1	KONE-1	1	B038400
8	EPA-365.4	02/28/19 20:30	03/04/19 13:53	JMH	SC-1	5	B038991

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500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905316-05	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW6, 2/19/2019 12:02:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	220	mg/L	0.10	0.016	EPA-200.7	0.019		1
Dissolved Magnesium	100	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	120	mg/L	0.50	0.051	EPA-200.7	0.11		1
Dissolved Potassium	8.4	mg/L	1.0	0.10	EPA-200.7	0.13		1
Bicarbonate Alkalinity as CaCO3	710	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	71	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	78	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.2	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.8	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:35	02/26/19 20:04	JRG	PE-OP2	1	B038580
2	SM-2320B	02/21/19 14:00	02/21/19 17:33	MEV	MET-1	2	B031722
3	EPA-300.0	02/20/19 15:00	02/20/19 19:04	EMM	IC5	5	B038174
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	10	B038360
5	EPA-351.2	02/28/19 20:30	03/04/19 11:43	JMH	SC-1	1	B038990
6	EPA-350.1	03/06/19 12:43	03/07/19 11:02	JMH	SC-1	1	B039440
7	EPA-353.2	02/20/19 10:21	02/20/19 10:25	MC1	KONE-1	1	B038400
8	EPA-365.4	02/28/19 20:30	03/04/19 13:54	JMH	SC-1	1	B038991

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Reported: 03/18/2019 12:31  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Durrer Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905316-06	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW7, 2/19/2019 12:37:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	200	mg/L	0.10	0.016	EPA-200.7	0.019		1
Dissolved Magnesium	130	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	190	mg/L	0.50	0.051	EPA-200.7	0.11		1
Dissolved Potassium	250	mg/L	1.0	0.10	EPA-200.7	0.13		1
Bicarbonate Alkalinity as CaCO3	1100	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	140	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	85	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	150	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2100	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	40	mg/L	5.0	0.90	EPA-351.2	ND	A07	5
Ammonia as N	36	mg/L	10	2.5	EPA-350.1	ND	A07	6
Nitrite as N	0.12	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	75	mg/L	3.8	1.2	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:40	02/26/19 20:06	JRG	PE-OP2	1	B038580
2	SM-2320B	02/21/19 14:00	02/21/19 17:40	MEV	MET-1	2	B031722
3	EPA-300.0	02/20/19 15:00	02/20/19 22:07	KEB	IC5	5	B038174
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	10	B038360
5	EPA-351.2	02/28/19 20:30	03/04/19 12:23	JMH	SC-1	25	B038990
6	EPA-350.1	03/06/19 12:43	03/07/19 11:05	JMH	SC-1	50	B039440
7	EPA-353.2	02/20/19 10:21	02/20/19 10:25	MC1	KONE-1	1	B038400
8	EPA-365.4	02/28/19 20:30	03/04/19 14:15	JMH	SC-1	25	B038991

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**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905316-07	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW8, 2/19/2019 12:18:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	80	mg/L	0.10	0.016	EPA-200.7	0.019		1
Dissolved Magnesium	29	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	67	mg/L	0.50	0.051	EPA-200.7	0.11		1
Dissolved Potassium	35	mg/L	1.0	0.10	EPA-200.7	0.13		1
Bicarbonate Alkalinity as CaCO3	430	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	33	mg/L	0.50	0.067	EPA-300.0	ND		3
Nitrate as N	1.0	mg/L	0.10	0.019	EPA-300.0	ND		3
Sulfate	51	mg/L	1.0	0.14	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	640	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	10	mg/L	1.0	0.18	EPA-351.2	ND	A07	5
Ammonia as N	11	mg/L	4.0	1.0	EPA-350.1	ND	A07	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	7.1	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:45	02/26/19 20:09	JRG	PE-OP2	1	B038580
2	SM-2320B	02/21/19 14:00	02/21/19 17:48	MEV	MET-1	2	B031722
3	EPA-300.0	02/20/19 15:00	02/20/19 20:15	EMM	IC5	1	B038174
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	3.333	B038360
5	EPA-351.2	02/28/19 20:30	03/04/19 11:47	JMH	SC-1	5	B038990
6	EPA-350.1	03/06/19 12:43	03/07/19 11:06	JMH	SC-1	20	B039440
7	EPA-353.2	02/20/19 10:21	02/20/19 10:25	MC1	KONE-1	1	B038400
8	EPA-365.4	02/28/19 20:30	03/04/19 13:57	JMH	SC-1	5	B038991

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Reported: 03/18/2019 12:31  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Durrer Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905316-08	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW9, 2/19/2019 12:57:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	110	mg/L	0.10	0.016	EPA-200.7	0.019		1
Dissolved Magnesium	39	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	63	mg/L	0.50	0.051	EPA-200.7	0.11		1
Dissolved Potassium	3.5	mg/L	1.0	0.10	EPA-200.7	0.13		1
Bicarbonate Alkalinity as CaCO3	410	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	29	mg/L	0.50	0.067	EPA-300.0	ND		3
Nitrate as N	8.1	mg/L	0.10	0.019	EPA-300.0	ND		3
Sulfate	69	mg/L	1.0	0.14	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	670	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.66	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.083	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	2.2	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:50	02/26/19 20:11	JRG	PE-OP2	1	B038580
2	SM-2320B	02/21/19 14:00	02/21/19 17:54	MEV	MET-1	1	B031722
3	EPA-300.0	02/20/19 15:00	02/20/19 20:33	EMM	IC5	1	B038174
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	3.333	B038360
5	EPA-351.2	02/28/19 20:30	03/04/19 11:47	JMH	SC-1	1	B038990
6	EPA-350.1	03/06/19 12:43	03/07/19 10:58	JMH	SC-1	1	B039440
7	EPA-353.2	02/20/19 10:21	02/20/19 10:25	MC1	KONE-1	1	B038400
8	EPA-365.4	02/28/19 20:30	03/04/19 13:57	JMH	SC-1	1	B038991

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**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905316-09	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW10d, 2/19/2019 11:36:00AM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	0.019		1
Dissolved Magnesium	81	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	270	mg/L	0.50	0.051	EPA-200.7	0.11		1
Dissolved Potassium	7.1	mg/L	1.0	0.10	EPA-200.7	0.13		1
Bicarbonate Alkalinity as CaCO3	730	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	140	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	74	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	92	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.94	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.10	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.35	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:55	02/26/19 20:14	JRG	PE-OP2	1	B038580
2	SM-2320B	02/21/19 14:00	02/21/19 18:00	MEV	MET-1	2	B031722
3	EPA-300.0	02/20/19 15:00	02/20/19 20:51	EMM	IC5	5	B038174
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	10	B038360
5	EPA-351.2	02/28/19 20:30	03/04/19 11:49	JMH	SC-1	1	B038990
6	EPA-350.1	03/07/19 12:57	03/08/19 11:03	JMH	SC-1	1	B039572
7	EPA-353.2	02/20/19 10:21	02/20/19 10:25	MC1	KONE-1	1	B038400
8	EPA-365.4	02/28/19 20:30	03/04/19 13:58	JMH	SC-1	1	B038991

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**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905316-10		Client Sample Name: Durrer Dairy, Field Duplicate #1, 2/19/2019 1:00:00PM, Del-Tech/Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	0.019		1
Dissolved Magnesium	82	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	270	mg/L	0.50	0.051	EPA-200.7	0.11		1
Dissolved Potassium	7.1	mg/L	1.0	0.10	EPA-200.7	0.13		1
Bicarbonate Alkalinity as CaCO3	740	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	150	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	73	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	99	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.91	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.077	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	0.34	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 16:00	02/26/19 20:17	JRG	PE-OP2	1	B038580
2	SM-2320B	02/21/19 14:00	02/21/19 18:23	MEV	MET-1	2	B031723
3	EPA-300.0	02/20/19 15:00	02/20/19 21:09	EMM	IC5	2	B038174
4	EPA-300.0	02/20/19 15:00	02/20/19 22:25	KEB	IC5	5	B038174
5	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	10	B038360
6	EPA-351.2	02/28/19 20:30	03/04/19 11:49	JMH	SC-1	1	B038990
7	EPA-350.1	03/07/19 12:57	03/08/19 11:06	JMH	SC-1	1	B039572
8	EPA-353.2	02/20/19 10:21	02/20/19 10:25	MC1	KONE-1	1	B038400
9	EPA-365.4	02/28/19 20:30	03/04/19 13:58	JMH	SC-1	1	B038991

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**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031722</b>						
Bicarbonate Alkalinity as CaCO3	B031722-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031722-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031722-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031723</b>						
Bicarbonate Alkalinity as CaCO3	B031723-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031723-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031723-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038174</b>						
Chloride	B038174-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038174-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038174-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038360</b>						
Total Dissolved Solids @ 180 C	B038360-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038400</b>						
Nitrite as N	B038400-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038580</b>						
Dissolved Calcium	B038580-BLK1	0.018650	mg/L	0.10	0.016	J
Dissolved Magnesium	B038580-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038580-BLK1	0.11145	mg/L	0.50	0.051	J
Dissolved Potassium	B038580-BLK1	0.12552	mg/L	1.0	0.10	J
<b>QC Batch ID: B038990</b>						
Total Kjeldahl Nitrogen	B038990-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B038991</b>						
Total Phosphate	B038991-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039437</b>						
Ammonia as N	B039437-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B039440</b>						
Ammonia as N	B039440-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B039572</b>						
Ammonia as N	B039572-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038174</b>										
Chloride	B038174-BS1	LCS	51.671	50.000	mg/L	103		90 - 110		
Nitrate as N	B038174-BS1	LCS	5.0910	5.0000	mg/L	102		90 - 110		
Sulfate	B038174-BS1	LCS	101.10	100.00	mg/L	101		90 - 110		
<b>QC Batch ID: B038360</b>										
Total Dissolved Solids @ 180 C	B038360-BS1	LCS	570.00	586.00	mg/L	97.3		90 - 110		
<b>QC Batch ID: B038400</b>										
Nitrite as N	B038400-BS1	LCS	0.52495	0.50000	mg/L	105		90 - 110		
<b>QC Batch ID: B038580</b>										
Dissolved Calcium	B038580-BS1	LCS	10.516	10.000	mg/L	105		85 - 115		
Dissolved Magnesium	B038580-BS1	LCS	10.440	10.000	mg/L	104		85 - 115		
Dissolved Sodium	B038580-BS1	LCS	9.6104	10.000	mg/L	96.1		85 - 115		
Dissolved Potassium	B038580-BS1	LCS	9.1095	10.000	mg/L	91.1		85 - 115		
<b>QC Batch ID: B038990</b>										
Total Kjeldahl Nitrogen	B038990-BS1	LCS	2.1169	2.0000	mg/L	106		90 - 110		
<b>QC Batch ID: B038991</b>										
Total Phosphate	B038991-BS1	LCS	3.0545	3.0660	mg/L	99.6		85 - 115		
<b>QC Batch ID: B039437</b>										
Ammonia as N	B039437-BS1	LCS	0.97180	1.0000	mg/L	97.2		90 - 110		
<b>QC Batch ID: B039440</b>										
Ammonia as N	B039440-BS1	LCS	0.94630	1.0000	mg/L	94.6		90 - 110		
<b>QC Batch ID: B039572</b>										
Ammonia as N	B039572-BS1	LCS	0.97870	1.0000	mg/L	97.9		90 - 110		

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Woodland, CA 95695

Reported: 03/18/2019 12:31
Project: Dairy Rep MP - Expanded Suite
Project Number: Durrer Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC batches B031722, B031723, B038174, B038360, B038400, and B038580.

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Woodland, CA 95695

**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B038990</b>		Used client sample: Y - Description: DUR-MW1, 02/19/2019 10:02								
Total Kjeldahl Nitrogen	DUP	1905316-01	ND	0.069800		mg/L			20	J
	MS	1905316-01	ND	0.99080	2.0000	mg/L		49.5	90 - 110	Q03
	MSD	1905316-01	ND	0.98280	2.0000	mg/L	0.8	49.1	20 90 - 110	Q03
<b>QC Batch ID: B038991</b>		Used client sample: Y - Description: DUR-MW1, 02/19/2019 10:02								
Total Phosphate	DUP	1905316-01	2.7617	2.6477		mg/L	4.2		20	
	MS	1905316-01	2.7617	5.7691	3.0660	mg/L		98.1	80 - 120	
	MSD	1905316-01	2.7617	5.6630	3.0660	mg/L	1.9	94.6	20 80 - 120	
<b>QC Batch ID: B039437</b>		Used client sample: N								
Ammonia as N	DUP	1905496-02	0.14380	0.12530		mg/L	13.7		10	J,A02
	MS	1905496-02	0.14380	1.2398	1.1111	mg/L		98.6	90 - 110	
	MSD	1905496-02	0.14380	1.2086	1.1111	mg/L	2.6	95.8	10 90 - 110	
<b>QC Batch ID: B039440</b>		Used client sample: Y - Description: DUR-MW9, 02/19/2019 12:57								
Ammonia as N	DUP	1905316-08	0.083200	0.081400		mg/L	2.2		10	J
	MS	1905316-08	0.083200	1.1188	1.1111	mg/L		93.2	90 - 110	
	MSD	1905316-08	0.083200	1.1773	1.1111	mg/L	5.1	98.5	10 90 - 110	
<b>QC Batch ID: B039572</b>		Used client sample: Y - Description: DUR-MW10d, 02/19/2019 11:36								
Ammonia as N	DUP	1905316-09	0.10290	0.092300		mg/L	10.9		10	J,A02
	MS	1905316-09	0.10290	1.2306	1.1111	mg/L		101	90 - 110	
	MSD	1905316-09	0.10290	1.1816	1.1111	mg/L	4.1	97.1	10 90 - 110	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 12:31  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 03/21/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Frank J. Dairy #1

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905972

Invoice ID: B334438

Enclosed are the results of analyses for samples received by the laboratory on 2/25/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905972

Samples were filtered through a 0.45 micron filter for requested analysis.



BC Laboratories, Inc.		4100 Atlas CL Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to:					
Name: Lohdorff and Scalmanini		Expanded Constituent Suite		Analysis Requested	
Address: 500 First Street		Project: Dairy Representative Monitoring Program		From Filtered Sample:	
City: Woodland		Site: Frank J. Gomes Dairy #1		Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	
State: 95685		Samplers Name: Antonio Del-Tech		From Unfiltered Sample:	
CA		Global ID - GADAIRY00004		Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3	
Attn: Till Angermann					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl, Pb Unpreserved
-1	FG1-MW1s, <del>EG1-MW1d</del>	2/25/19	1157	GW	X
-2	FG1-MW2s, <del>EG1-MW2d</del>		1232		X
-3	FG1-MW3s, <del>FG1-MW3d</del>		1217		X
-4	FG1-MW4s, <del>FG1-MW4d</del>		1137		X
-5	FG1-MW5s, <del>FG1-MW5d</del>		1117		X
-6	FG1-MW6s, <del>FG1-MW6d</del>		1647		X
-7	FG1-MW7s, <del>FG1-MW7d</del>		1027		X
-8	FG1-MW8s, <del>FG1-MW8d</del>		946		X
-9	EG1-MW9s, FG1-MW9d				X
10	Field Duplicate				X
11					
12					
13					

  

Relinquished by: (Signature) <i>A. K. Marshall</i>	Date & Time 2/25/19 1830
Relinquished by: (Signature) <i>[Signature]</i>	Date & Time 2/25/19 2215
Relinquished by: (Signature) <i>[Signature]</i>	Date & Time [Blank]

  

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Lohdorff and Scalmanini Consulting Engineers via email: llavagnino@lscce.com, rhyson@lscce.com, puthalwal@lscce.com, jlovells@lscce.com  
 4) Send invoices to Jeannette Lovells (jlovells@lscce.com).

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LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-05972

SHIPPING INFORMATION
Ex [ ] UPS [ ] Ontrac [ ] Hand Delivery [ ]
Lab Field Service [x] Other [ ] (Specify) \_\_\_\_\_

SHIPPING CONTAINER
Ice Chest [x] None [ ] Box [ ]
Other [ ] (Specify) \_\_\_\_\_

FREE LIQUID
YES [ ] NO [ ]
W / S

Refrigerant: Ice [x] Blue Ice [ ] None [ ] Other [ ] Comments:

Study Seals Ice Chest [ ] Containers [ ] None [x]
Intact? Yes [ ] No [ ] Intact? Yes [ ] No [ ]

Samples received? Yes [x] No [ ] All samples containers intact? Yes [x] No [ ] Description(s) match COC? Yes [x] No [ ]

COC Received
YES [x] NO [ ]

Emissivity: 0.98 Container: PE Thermometer ID: 208
Temperature: (A) 4.2 °C / (C) 4.5 °C

Date/Time 2/25 2235
Analyst Init EAW

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various sample types like PE UNPRES, INORGANIC CHEMICAL METALS, etc. Sample numbers 1-10 are marked with 'A'.

Stamp: SHORT HOLDING TIME SS NOV 11 10:45 AM DO NOT REMOVE FROM THIS CONTAINER FOR DISTRIBUTION BY DATE 11/11/11 SUBMIT

Comments:
Sample Numbering Completed By: [Signature] Date/Time: 2-25-10 2240
= Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905972-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Frank J. Gomes	<b>Sampling Date:</b>	02/25/2019 11:57
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905972-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Frank J. Gomes	<b>Sampling Date:</b>	02/25/2019 12:32
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905972-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Frank J. Gomes	<b>Sampling Date:</b>	02/25/2019 12:17
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905972-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Frank J. Gomes	<b>Sampling Date:</b>	02/25/2019 11:37
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905972-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Frank J. Gomes	<b>Sampling Date:</b>	02/25/2019 11:17
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1905972-06</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Frank J. Gomes	<b>Sampling Date:</b> 02/25/2019 10:47
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> FG1-MW6s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Antonio Morales of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905972-07</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Frank J. Gomes	<b>Sampling Date:</b> 02/25/2019 10:27
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> FG1-MW7s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Antonio Morales of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905972-08</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Frank J. Gomes	<b>Sampling Date:</b> 02/25/2019 10:07
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> FG1-MW8s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Antonio Morales of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905972-09</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Frank J. Gomes	<b>Sampling Date:</b> 02/25/2019 09:46
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> FG1-MW9d	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Antonio Morales of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/21/2019 16:07  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Frank J. Dairy #1  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905972-01	Client Sample Name:	Frank J. Gomes, FG1-MW1s, 2/25/2019 11:57:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	0.017		1	
Dissolved Magnesium	57	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	250	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	3.3	mg/L	1.0	0.10	EPA-200.7	ND		1	
Bicarbonate Alkalinity as CaCO3	900	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	190	mg/L	1.0	0.15	EPA-300.0	ND	A07	3	
Nitrate as N	0.26	mg/L	0.10	0.021	EPA-300.0	ND		4	
Sulfate	66	mg/L	1.0	0.13	EPA-300.0	ND		4	
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		5	
Total Kjeldahl Nitrogen	0.70	mg/L	0.20	0.036	EPA-351.2	ND		6	
Ammonia as N	0.12	mg/L	0.20	0.050	EPA-350.1	ND	J	7	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8	
Total Phosphate	1.2	mg/L	0.15	0.050	EPA-365.4	ND		9	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:10	03/06/19 15:50	JRG	PE-OP2	1	B039076
2	SM-2320B	02/27/19 13:00	02/27/19 18:49	MEV	MET-1	2	B031750
3	EPA-300.0	02/25/19 21:00	02/26/19 13:44	SAV	IC8	2	B038621
4	EPA-300.0	02/25/19 21:00	02/26/19 18:31	KEB	IC8	1	B038621
5	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	10	B038953
6	EPA-351.2	03/07/19 20:30	03/13/19 08:43	JMH	SC-1	1	B039692
7	EPA-350.1	03/13/19 12:39	03/15/19 08:49	JMH	SC-1	1	B040147
8	EPA-353.2	02/26/19 11:10	02/26/19 11:11	MC1	KONE-1	1	B038891
9	EPA-365.4	03/07/19 20:30	03/13/19 09:54	JMH	SC-1	1	B039693

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Woodland, CA 95695

Reported: 03/21/2019 16:07  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Frank J. Dairy #1  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905972-02	Client Sample Name:	Frank J. Gomes, FG1-MW2s, 2/25/2019 12:32:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	230	mg/L	0.10	0.016	EPA-200.7	0.017		1	
Dissolved Magnesium	63	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	360	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	580	mg/L	1.0	0.10	EPA-200.7	ND		1	
Bicarbonate Alkalinity as CaCO3	710	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	790	mg/L	2.5	0.38	EPA-300.0	ND	A07	3	
Nitrate as N	89	mg/L	0.50	0.10	EPA-300.0	ND	A07	3	
Sulfate	270	mg/L	5.0	0.65	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	3300	mg/L	200	100	SM-2540C	ND		4	
Total Kjeldahl Nitrogen	9.3	mg/L	0.50	0.090	EPA-351.2	ND	A07	5	
Ammonia as N	0.95	mg/L	0.20	0.050	EPA-350.1	ND		6	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7	
Total Phosphate	4.3	mg/L	0.15	0.050	EPA-365.4	ND		8	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:14	03/06/19 16:03	JRG	PE-OP2	1	B039076
2	SM-2320B	02/27/19 13:00	02/27/19 18:55	MEV	MET-1	2	B031750
3	EPA-300.0	02/25/19 21:00	02/26/19 18:52	EMM	IC8	5	B038621
4	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	20	B038953
5	EPA-351.2	03/18/19 20:00	03/19/19 16:24	JMH	SC-1	2.500	B040705
6	EPA-350.1	03/13/19 12:39	03/15/19 08:49	JMH	SC-1	1	B040147
7	EPA-353.2	02/26/19 11:10	02/26/19 11:16	MC1	KONE-1	1	B038891
8	EPA-365.4	03/07/19 20:30	03/13/19 09:55	JMH	SC-1	1	B039693

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**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905972-03		Client Sample Name: Frank J. Gomes, FG1-MW3s, 2/25/2019 12:17:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	64	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	200	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	6.8	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	780	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	190	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	13	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	42	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	1200	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.36	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.078	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	2.6	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:17	03/06/19 16:06	JRG	PE-OP2	1	B039076
2	SM-2320B	02/27/19 13:00	02/27/19 19:04	MEV	MET-1	2	B031750
3	EPA-300.0	02/25/19 21:00	02/26/19 23:59	KEB	IC8	1	B038621
4	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	10	B038953
5	EPA-351.2	03/07/19 20:30	03/13/19 08:45	JMH	SC-1	1	B039692
6	EPA-350.1	03/13/19 12:39	03/15/19 08:51	JMH	SC-1	1	B040147
7	EPA-353.2	02/26/19 11:10	02/26/19 11:16	MC1	KONE-1	1	B038891
8	EPA-365.4	03/07/19 20:30	03/13/19 09:55	JMH	SC-1	1	B039693

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**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905972-04		Client Sample Name: Frank J. Gomes, FG1-MW4s, 2/25/2019 11:37:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	49	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	200	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	30	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	110	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	350	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	97	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	120	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.85	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.14	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.43	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	6.2	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:20	03/06/19 16:14	JRG	PE-OP2	1	B039076
2	SM-2320B	02/27/19 13:00	02/27/19 19:10	MEV	MET-1	2	B031750
3	EPA-300.0	02/25/19 21:00	02/27/19 00:20	SAV	IC8	5	B038621
4	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	10	B038953
5	EPA-351.2	03/07/19 20:30	03/13/19 08:46	JMH	SC-1	1	B039692
6	EPA-350.1	03/13/19 12:39	03/15/19 08:53	JMH	SC-1	1	B040147
7	EPA-353.2	02/26/19 11:10	02/26/19 11:16	MC1	KONE-1	1	B038891
8	EPA-365.4	03/07/19 20:30	03/13/19 09:56	JMH	SC-1	1	B039693

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Reported: 03/21/2019 16:07  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Frank J. Dairy #1  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905972-05		Client Sample Name: Frank J. Gomes, FG1-MW5s, 2/25/2019 11:17:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	83	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	37	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	330	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	6.1	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	450	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	320	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	14	mg/L	0.10	0.021	EPA-300.0	ND		4
Sulfate	200	mg/L	1.0	0.13	EPA-300.0	ND		4
Total Dissolved Solids @ 180 C	1300	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.61	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.11	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	0.18	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:25	03/06/19 16:16	JRG	PE-OP2	1	B039076
2	SM-2320B	02/27/19 13:00	02/27/19 19:17	MEV	MET-1	2	B031750
3	EPA-300.0	02/27/19 18:00	02/28/19 04:25	SAV	IC1	2	B038859
4	EPA-300.0	02/25/19 21:00	02/27/19 00:40	SAV	IC8	1	B038621
5	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	10	B038953
6	EPA-351.2	03/07/19 20:30	03/13/19 08:21	JMH	SC-1	1	B039694
7	EPA-350.1	03/13/19 12:39	03/15/19 08:54	JMH	SC-1	1	B040147
8	EPA-353.2	02/26/19 11:10	02/26/19 11:16	MC1	KONE-1	1	B038891
9	EPA-365.4	03/07/19 20:30	03/12/19 16:41	JMH	SC-1	1	B039695

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**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905972-06		Client Sample Name: Frank J. Gomes, FG1-MW6s, 2/25/2019 10:47:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	57	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	25	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	79	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	5.0	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	97	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	110	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	37	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	43	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	640	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.24	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.11	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.13	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	3.4	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:30	03/06/19 16:19	JRG	PE-OP2	1	B039076
2	SM-2320B	02/27/19 13:00	02/27/19 19:23	MEV	MET-1	1	B031750
3	EPA-300.0	02/25/19 21:00	02/27/19 01:01	SAV	IC8	2	B038621
4	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	3.333	B038953
5	EPA-351.2	03/07/19 20:30	03/13/19 08:21	JMH	SC-1	1	B039694
6	EPA-350.1	03/13/19 12:39	03/15/19 09:00	JMH	SC-1	1	B040149
7	EPA-353.2	02/26/19 11:10	02/26/19 11:16	MC1	KONE-1	1	B038891
8	EPA-365.4	03/07/19 20:30	03/12/19 16:42	JMH	SC-1	1	B039695

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**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905972-07	<b>Client Sample Name:</b> Frank J. Gomes, FG1-MW7s, 2/25/2019 10:27:00AM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	58	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	22	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	50	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	6.6	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	100	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	77	mg/L	1.0	0.15	EPA-300.0	ND	A07	3
Nitrate as N	28	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	46	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	580	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.63	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.11	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	3.4	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:35	03/06/19 16:22	JRG	PE-OP2	1	B039076
2	SM-2320B	02/27/19 13:00	02/27/19 19:29	MEV	MET-1	1	B031750
3	EPA-300.0	02/25/19 21:00	02/27/19 01:21	SAV	IC8	2	B038621
4	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	3.333	B038953
5	EPA-351.2	03/07/19 20:30	03/13/19 08:23	JMH	SC-1	1	B039694
6	EPA-350.1	03/13/19 12:39	03/15/19 09:02	JMH	SC-1	1	B040149
7	EPA-353.2	02/26/19 11:10	02/26/19 11:16	MC1	KONE-1	1	B038891
8	EPA-365.4	03/07/19 20:30	03/12/19 16:43	JMH	SC-1	1	B039695

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**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905972-08		Client Sample Name: Frank J. Gomes, FG1-MW8s, 2/25/2019 10:07:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	88	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	45	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	95	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.5	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	360	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	120	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	3.1	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	96	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	760	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.42	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.14	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	ND	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:35	03/06/19 16:24	JRG	PE-OP2	1	B039076
2	SM-2320B	02/27/19 13:00	02/27/19 18:22	MEV	MET-1	2	B031750
3	EPA-300.0	02/25/19 21:00	02/27/19 01:42	SAV	IC8	1	B038621
4	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	5	B038953
5	EPA-351.2	03/07/19 20:30	03/13/19 08:23	JMH	SC-1	1	B039694
6	EPA-350.1	03/13/19 12:39	03/15/19 09:04	JMH	SC-1	1	B040149
7	EPA-353.2	02/26/19 11:10	02/26/19 11:16	MC1	KONE-1	1	B038891
8	EPA-365.4	03/07/19 20:30	03/12/19 16:43	JMH	SC-1	1	B039695

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**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905972-09		Client Sample Name: Frank J. Gomes, FG1-MW9d, 2/25/2019 9:46:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	37	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	20	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	40	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.7	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	150	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	51	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	0.093	mg/L	0.10	0.021	EPA-300.0	ND	J	3
Sulfate	41	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	330	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.36	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.099	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	ND	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:40	03/06/19 16:27	JRG	PE-OP2	1	B039076
2	SM-2320B	02/27/19 13:00	02/27/19 19:53	MEV	MET-1	1	B031751
3	EPA-300.0	02/25/19 21:00	02/27/19 02:02	SAV	IC8	1	B038621
4	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	2	B038953
5	EPA-351.2	03/07/19 20:30	03/13/19 08:25	JMH	SC-1	1	B039694
6	EPA-350.1	03/13/19 12:39	03/15/19 09:05	JMH	SC-1	1	B040149
7	EPA-353.2	02/26/19 11:10	02/26/19 11:16	MC1	KONE-1	1	B038891
8	EPA-365.4	03/07/19 20:30	03/12/19 16:44	JMH	SC-1	1	B039695

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031750</b>						
Bicarbonate Alkalinity as CaCO3	B031750-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031750-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031750-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031751</b>						
Bicarbonate Alkalinity as CaCO3	B031751-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031751-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031751-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038621</b>						
Chloride	B038621-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B038621-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B038621-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B038859</b>						
Chloride	B038859-BLK1	ND	mg/L	0.50	0.067	
<b>QC Batch ID: B038891</b>						
Nitrite as N	B038891-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038953</b>						
Total Dissolved Solids @ 180 C	B038953-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B039076</b>						
Dissolved Calcium	B039076-BLK1	0.017285	mg/L	0.10	0.016	J
Dissolved Magnesium	B039076-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039076-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B039076-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039692</b>						
Total Kjeldahl Nitrogen	B039692-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039693</b>						
Total Phosphate	B039693-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039694</b>						
Total Kjeldahl Nitrogen	B039694-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039695</b>						
Total Phosphate	B039695-BLK1	ND	mg/L	0.15	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B040147</b>						
Ammonia as N	B040147-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B040149</b>						
Ammonia as N	B040149-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B040705</b>						
Total Kjeldahl Nitrogen	B040705-BLK1	ND	mg/L	0.20	0.036	

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Woodland, CA 95695

**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038621</b>										
Chloride	B038621-BS1	LCS	49.414	50.000	mg/L	98.8		90 - 110		
Nitrate as N	B038621-BS1	LCS	4.8600	5.0000	mg/L	97.2		90 - 110		
Sulfate	B038621-BS1	LCS	98.800	100.00	mg/L	98.8		90 - 110		
<b>QC Batch ID: B038859</b>										
Chloride	B038859-BS1	LCS	52.534	50.000	mg/L	105		90 - 110		
<b>QC Batch ID: B038891</b>										
Nitrite as N	B038891-BS1	LCS	0.48907	0.50000	mg/L	97.8		90 - 110		
<b>QC Batch ID: B038953</b>										
Total Dissolved Solids @ 180 C	B038953-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B039076</b>										
Dissolved Calcium	B039076-BS1	LCS	9.6147	10.000	mg/L	96.1		85 - 115		
Dissolved Magnesium	B039076-BS1	LCS	9.5232	10.000	mg/L	95.2		85 - 115		
Dissolved Sodium	B039076-BS1	LCS	8.7876	10.000	mg/L	87.9		85 - 115		
Dissolved Potassium	B039076-BS1	LCS	9.4600	10.000	mg/L	94.6		85 - 115		
<b>QC Batch ID: B039692</b>										
Total Kjeldahl Nitrogen	B039692-BS1	LCS	1.9095	2.0000	mg/L	95.5		90 - 110		
<b>QC Batch ID: B039693</b>										
Total Phosphate	B039693-BS1	LCS	2.9905	3.0660	mg/L	97.5		85 - 115		
<b>QC Batch ID: B039694</b>										
Total Kjeldahl Nitrogen	B039694-BS1	LCS	1.9301	2.0000	mg/L	96.5		90 - 110		
<b>QC Batch ID: B039695</b>										
Total Phosphate	B039695-BS1	LCS	3.0104	3.0660	mg/L	98.2		85 - 115		
<b>QC Batch ID: B040147</b>										
Ammonia as N	B040147-BS1	LCS	0.94860	1.0000	mg/L	94.9		90 - 110		
<b>QC Batch ID: B040149</b>										
Ammonia as N	B040149-BS1	LCS	0.98060	1.0000	mg/L	98.1		90 - 110		
<b>QC Batch ID: B040705</b>										
Total Kjeldahl Nitrogen	B040705-BS1	LCS	2.0027	2.0000	mg/L	100		90 - 110		

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500 First Street  
Woodland, CA 95695

Reported: 03/21/2019 16:07  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Frank J. Dairy #1  
Project Manager: Till Angermann

### Water Analysis (General Chemistry) Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B031750</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1905972-08	357.82	360.25		mg/L	0.7		10	
Carbonate Alkalinity as CaCO3	DUP	1905972-08	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1905972-08	ND	ND		mg/L			10	
<b>QC Batch ID: B031751</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1905972-09	152.28	151.07		mg/L	0.8		10	
Carbonate Alkalinity as CaCO3	DUP	1905972-09	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1905972-09	ND	ND		mg/L			10	
<b>QC Batch ID: B038621</b>		Used client sample: Y - Description: FG1-MW1s, 02/25/2019 11:57								
Chloride	DUP	1905972-01	187.05	192.20		mg/L	2.7		10	
	MS	1905972-01	187.05	292.78	101.01	mg/L		105		80 - 120
	MSD	1905972-01	187.05	292.46	101.01	mg/L	0.1	104	10	80 - 120
Nitrate as N	DUP	1905972-01	0.27000	0.25400		mg/L	6.1		10	
	MS	1905972-01	0.27000	10.275	10.101	mg/L		99.0		80 - 120
	MSD	1905972-01	0.27000	10.121	10.101	mg/L	1.5	97.5	10	80 - 120
Sulfate	DUP	1905972-01	58.222	59.568		mg/L	2.3		10	
	MS	1905972-01	58.222	274.17	202.02	mg/L		107		80 - 120
	MSD	1905972-01	58.222	274.03	202.02	mg/L	0.1	107	10	80 - 120
<b>QC Batch ID: B038859</b>		Used client sample: N								
Chloride	DUP	1906210-11	108.81	106.61		mg/L	2.0		10	
	MS	1906210-11	108.81	157.14	50.505	mg/L		95.7		80 - 120
	MSD	1906210-11	108.81	156.81	50.505	mg/L	0.2	95.0	10	80 - 120
<b>QC Batch ID: B038891</b>		Used client sample: Y - Description: FG1-MW1s, 02/25/2019 11:57								
Nitrite as N	DUP	1905972-01	ND	ND		mg/L			10	
	MS	1905972-01	ND	0.53807	0.52632	mg/L		102		90 - 110
	MSD	1905972-01	ND	0.54036	0.52632	mg/L	0.4	103	10	90 - 110
<b>QC Batch ID: B038953</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1905935-01	31900	32300		mg/L	1.2		10	
<b>QC Batch ID: B039076</b>		Used client sample: Y - Description: FG1-MW1s, 02/25/2019 11:57								
Dissolved Calcium	DUP	1905972-01	147.43	150.20		mg/L	1.9		20	
	MS	1905972-01	147.43	153.69	10.204	mg/L		61.3		85 - 115 A03
	MSD	1905972-01	147.43	156.19	10.204	mg/L	1.6	85.8	20	85 - 115
Dissolved Magnesium	DUP	1905972-01	56.528	56.806		mg/L	0.5		20	
	MS	1905972-01	56.528	65.504	10.204	mg/L		88.0		85 - 115
	MSD	1905972-01	56.528	66.840	10.204	mg/L	2.0	101	20	85 - 115

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/21/2019 16:07  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Frank J. Dairy #1  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B039076</b>		Used client sample: Y - Description: FG1-MW1s, 02/25/2019 11:57								
Dissolved Sodium	DUP	1905972-01	247.45	252.11		mg/L	1.9		20	
	MS	1905972-01	247.45	252.29	10.204	mg/L		47.5		A03
	MSD	1905972-01	247.45	256.27	10.204	mg/L	1.6	86.5	20	85 - 115
Dissolved Potassium	DUP	1905972-01	3.2878	3.1398		mg/L	4.6		20	
	MS	1905972-01	3.2878	13.976	10.204	mg/L		105		85 - 115
	MSD	1905972-01	3.2878	14.050	10.204	mg/L	0.5	105	20	85 - 115
<b>QC Batch ID: B039692</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1905937-01	1.2428	1.1999		mg/L	3.5		20	
	MS	1905937-01	1.2428	3.1099	2.0000	mg/L		93.4		90 - 110
	MSD	1905937-01	1.2428	3.1537	2.0000	mg/L	1.4	95.5	20	90 - 110
<b>QC Batch ID: B039693</b>		Used client sample: N								
Total Phosphate	DUP	1905937-01	5.0347	4.9875		mg/L	0.9		20	
	MS	1905937-01	5.0347	8.1303	3.0660	mg/L		101		80 - 120
	MSD	1905937-01	5.0347	8.0709	3.0660	mg/L	0.7	99.0	20	80 - 120
<b>QC Batch ID: B039694</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1905930-01	0.099800	0.075000		mg/L	28.4		20	J,A02
	MS	1905930-01	0.099800	2.1128	2.0000	mg/L		101		90 - 110
	MSD	1905930-01	0.099800	2.1043	2.0000	mg/L	0.4	100	20	90 - 110
<b>QC Batch ID: B039695</b>		Used client sample: N								
Total Phosphate	DUP	1905930-01	0.19133	0.15944		mg/L	18.2		20	
	MS	1905930-01	0.19133	3.0831	3.0660	mg/L		94.3		80 - 120
	MSD	1905930-01	0.19133	3.1907	3.0660	mg/L	3.4	97.8	20	80 - 120
<b>QC Batch ID: B040147</b>		Used client sample: N								
Ammonia as N	DUP	1905930-04	0.11220	0.12010		mg/L	6.8		10	J
	MS	1905930-04	0.11220	1.1563	1.1111	mg/L		94.0		90 - 110
	MSD	1905930-04	0.11220	1.1886	1.1111	mg/L	2.7	96.9	10	90 - 110
<b>QC Batch ID: B040149</b>		Used client sample: N								
Ammonia as N	DUP	1906294-02	0.10650	0.10210		mg/L	4.2		10	J
	MS	1906294-02	0.10650	1.1822	1.1111	mg/L		96.8		90 - 110
	MSD	1906294-02	0.10650	1.2358	1.1111	mg/L	4.4	102	10	90 - 110
<b>QC Batch ID: B040705</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1906919-02	2.2050	2.1891		mg/L	0.7		20	
	MS	1906919-02	2.2050	4.2722	2.0000	mg/L		103		90 - 110
	MSD	1906919-02	2.2050	4.2484	2.0000	mg/L	0.6	102	20	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/21/2019 16:07  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Dairy #1  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 03/20/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Gallo Cattle Company Bear Creek

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905971

Invoice ID: B334326

Enclosed are the results of analyses for samples received by the laboratory on 2/25/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905971

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



# BC Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC Laboratories, Inc.		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to:					
Expanded Constituent Suite					
Project: Dairy Representative Monitoring Program					
Site: Gallo Cattle Company Bear Creek, Bk2019					
Samplers Name: Antonio Delacruz					
Global ID - GADAIRY00005					
Name:	Luhdorff and Scalimanni				
Address:	500 First Street				
City:	Woodland				
State:	95695				
CA Attn:	Till Angermann				
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl Fe Unpreserved
-1	BEA-MW1s, BEA-MW1d, BEA-MW1dd	2/25/19	1643	6W	x
-2	BEA-MW2s, BEA-MW2d, BEA-MW2dd		1745		x
-3	BEA-MW3s, BEA-MW3d		1700		x
-4	BEA-MW4s, BEA-MW4d		1723		x
5	Field Duplicate				x
6					x
7					x
8					x
9					x
10					x
11					x

  

Analysis Requested		From Filtered Sample:	From Filtered Sample:	From Unfiltered Sample:
		Ammonia-N, NO3-N, NO2-N	NH, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3

  

SHORT HOLDING TIME Cl <sup>-</sup> NO <sub>2</sub> NO <sub>3</sub> OF SS DO Cl BOD MBAS GOT	SHIP DISTRIBUTION SUB-OUT
---	---------------------------------

  

Relinquished by: (Signature)	Received By:	Date & Time
<i>Antonio Delacruz</i>	<i>Antonio Delacruz</i>	2/25/19 18:30
Relinquished by: (Signature)	Received by:	Date & Time
<i>Antonio Delacruz</i>	<i>Antonio Delacruz</i>	2/25/19 22:15
Relinquished by: (Signature)	Received by:	Date & Time

  

**Comments:**

- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Luhdorff and Scalimanni Consulting Engineers via email: [lavagnino@lsc.com](mailto:lavagnino@lsc.com), [fbryson@lsc.com](mailto:fbryson@lsc.com), [pthalwal@lsc.com](mailto:pthalwal@lsc.com).
- Send invoices to Jeanette Lovelis ([jlovelis@lsc.com](mailto:jlovelis@lsc.com)).

(A) = Analysis (C) = Container (P) = Preservative

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Page 1 Of 1

LABORATORIES INC. COOLER RECEIPT FORM

Submission #: 19-05971

SHIPPING INFORMATION <input type="checkbox"/> Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> <input checked="" type="checkbox"/> Lab Field Service <input type="checkbox"/> Other (Specify) _____		SHIPPING CONTAINER <input checked="" type="checkbox"/> Ice Chest <input type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> <input type="checkbox"/> Other (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S	
--	--	---	--	--	--

Refrigerant:  Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Study Seals:  Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

Samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received <b>YES</b> <input type="checkbox"/> NO	Emissivity: 0.98 Container: PE Thermometer ID: 208 Temperature: (A) 4.2 °C / (C) 4.5 °C	Date/Time: 2/25/2016 Analyst Init: ENE
--	--	---

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
PE UNPRES	A	A	A	A						
8oz / 16oz PE UNPRES										
Cr <sup>4</sup>										
INORGANIC CHEMICAL METALS										
ORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
CYANIDE										
NITROGEN FORMS										
TOTAL SULFIDE										
NITRATE / NITRITE										
TOTAL ORGANIC CARBON										
CHEMICAL OXYGEN DEMAND										
PHENOLICS										
ml VOA VIAL TRAVEL BLANK										
ml VOA VIAL										
EPA 1664										
ODOR										
BIOLOGICAL										
BACTERIOLOGICAL										
ml VOA VIAL- 504										
EPA 503/608/6080										
EPA 515.1/8150										
EPA 525										
EPA 525 TRAVEL BLANK										
ml EPA 547										
ml EPA 531.1										
EPA 548										
EPA 549										
EPA 8015M										
EPA 8270										
oz / 16oz / 32oz AMBER										
oz / 16oz / 32oz IAR										
OIL SLEEVE										
CB VIAL										
LASTIC BAG										
EDLAR BAG										
ERROUS IRON										
NCORE										
MART KIT										
UMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: \_\_\_\_\_ Date/Time: 2-25-16 2240 Rev 21 05/23/2016

= Actual / C = Corrected

(S:\WPDoc\WordPerfect\LAB\_DOC\CFDMS\ISANREC.rvt 20)

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 21:56  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Bear Creek  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905971-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Gallo Cattle Company	<b>Sampling Date:</b>	02/25/2019 16:43
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BEA-MW1dd	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	1-Field Filtered and Acidified
1905971-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Gallo Cattle Company	<b>Sampling Date:</b>	02/25/2019 17:45
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BEA-MW2dd	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	1-Field Filtered and Acidified
1905971-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Gallo Cattle Company	<b>Sampling Date:</b>	02/25/2019 17:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BEA-MW3d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	1-Field Filtered and Acidified
1905971-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/25/2019 22:15
	<b>Project Number:</b>	Gallo Cattle Company	<b>Sampling Date:</b>	02/25/2019 17:23
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BEA-MW4d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	1-Field Filtered and Acidified

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Woodland, CA 95695

**Reported:** 03/20/2019 21:56  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Bear Creek  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905971-01	<b>Client Sample Name:</b> Gallo Cattle Company, BEA-MW1dd, 2/25/2019 4:43:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	98	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	38	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	74	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	32	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	550	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	46	mg/L	0.50	0.067	EPA-300.0	ND		3
Nitrate as N	ND	mg/L	0.10	0.019	EPA-300.0	ND		3
Sulfate	11	mg/L	1.0	0.14	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	760	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	11	mg/L	0.50	0.090	EPA-351.2	ND	A07	5
Ammonia as N	11	mg/L	2.0	0.50	EPA-350.1	ND	A07	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.0	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:00	03/01/19 18:25	JRG	PE-OP2	1	B039074
2	SM-2320B	02/27/19 12:00	02/27/19 17:57	MEV	MET-1	2	B031749
3	EPA-300.0	02/26/19 13:00	02/26/19 14:32	SAV	IC2	1	B038699
4	SM-2540C	02/28/19 13:30	02/28/19 13:30	CAD	MANUAL	5	B038951
5	EPA-351.2	03/17/19 17:00	03/18/19 12:07	JMH	SC-1	2.500	B040530
6	EPA-350.1	03/18/19 12:10	03/19/19 08:59	JMH	SC-1	10	B040566
7	EPA-353.2	02/26/19 10:06	02/26/19 10:36	MC1	KONE-1	1	B038889
8	EPA-365.4	03/07/19 20:30	03/13/19 09:51	JMH	SC-1	5	B039693

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Woodland, CA 95695

Reported: 03/20/2019 21:56  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Gallo Cattle Company Bear Creek  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905971-02	<b>Client Sample Name:</b> Gallo Cattle Company, BEA-MW2dd, 2/25/2019 5:45:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	75	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	18	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	45	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	8.2	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	170	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	36	mg/L	0.50	0.067	EPA-300.0	ND		3
Nitrate as N	5.7	mg/L	0.10	0.019	EPA-300.0	ND		3
Sulfate	120	mg/L	1.0	0.14	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	520	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.16	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	0.096	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.20	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:02	03/01/19 18:27	JRG	PE-OP2	1	B039074
2	SM-2320B	02/27/19 12:00	02/27/19 16:31	MEV	MET-1	1	B031749
3	EPA-300.0	02/26/19 13:00	02/26/19 15:55	KEB	IC2	1	B038699
4	SM-2540C	02/28/19 13:30	02/28/19 13:30	CAD	MANUAL	3.333	B038951
5	EPA-351.2	03/07/19 20:30	03/13/19 08:41	JMH	SC-1	1	B039692
6	EPA-350.1	03/13/19 12:39	03/15/19 08:46	JMH	SC-1	1	B040147
7	EPA-353.2	02/26/19 10:06	02/26/19 11:11	MC1	KONE-1	1	B038890
8	EPA-365.4	03/07/19 20:30	03/13/19 09:52	JMH	SC-1	1	B039693

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Woodland, CA 95695

**Reported:** 03/20/2019 21:56  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Bear Creek  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905971-03	<b>Client Sample Name:</b> Gallo Cattle Company, BEA-MW3d, 2/25/2019 5:00:00PM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	210	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	61	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	500	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	10	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	640	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	480	mg/L	5.0	0.67	EPA-300.0	ND	A07	3
Nitrate as N	120	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	160	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2400	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.1	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.12	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.45	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:04	03/01/19 18:30	JRG	PE-OP2	1	B039074
2	SM-2320B	02/27/19 13:00	02/27/19 18:35	MEV	MET-1	2	B031750
3	EPA-300.0	02/26/19 13:00	02/26/19 16:15	KEB	IC2	10	B038699
4	SM-2540C	02/28/19 13:30	02/28/19 13:30	CAD	MANUAL	10	B038951
5	EPA-351.2	03/07/19 20:30	03/13/19 08:41	JMH	SC-1	1	B039692
6	EPA-350.1	03/13/19 12:39	03/15/19 08:47	JMH	SC-1	1	B040147
7	EPA-353.2	02/26/19 10:06	02/26/19 11:11	MC1	KONE-1	1	B038890
8	EPA-365.4	03/07/19 20:30	03/13/19 09:53	JMH	SC-1	1	B039693

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Woodland, CA 95695

Reported: 03/20/2019 21:56  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Gallo Cattle Company Bear Creek  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905971-04	<b>Client Sample Name:</b> Gallo Cattle Company, BEA-MW4d, 2/25/2019 5:23:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	53	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	16	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	140	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	5.0	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	320	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	59	mg/L	0.50	0.067	EPA-300.0	ND		3
Nitrate as N	6.4	mg/L	0.10	0.019	EPA-300.0	ND		3
Sulfate	55	mg/L	1.0	0.14	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	610	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.38	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.086	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.059	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	2.3	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/26/19 13:08	03/01/19 18:32	JRG	PE-OP2	1	B039074
2	SM-2320B	02/27/19 13:00	02/27/19 18:41	MEV	MET-1	1	B031750
3	EPA-300.0	02/26/19 13:00	02/26/19 16:36	KEB	IC2	1	B038699
4	SM-2540C	02/28/19 13:30	02/28/19 13:30	CAD	MANUAL	3.333	B038951
5	EPA-351.2	03/07/19 20:30	03/13/19 08:43	JMH	SC-1	1	B039692
6	EPA-350.1	03/13/19 12:39	03/15/19 08:48	JMH	SC-1	1	B040147
7	EPA-353.2	02/26/19 10:06	02/26/19 11:11	MC1	KONE-1	1	B038890
8	EPA-365.4	03/07/19 20:30	03/13/19 09:53	JMH	SC-1	1	B039693

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**Reported:** 03/20/2019 21:56  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Bear Creek  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031749</b>						
Bicarbonate Alkalinity as CaCO3	B031749-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031749-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031749-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031750</b>						
Bicarbonate Alkalinity as CaCO3	B031750-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031750-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031750-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038699</b>						
Chloride	B038699-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038699-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038699-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038889</b>						
Nitrite as N	B038889-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038890</b>						
Nitrite as N	B038890-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038951</b>						
Total Dissolved Solids @ 180 C	B038951-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B039074</b>						
Dissolved Calcium	B039074-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039074-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039074-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B039074-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039692</b>						
Total Kjeldahl Nitrogen	B039692-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039693</b>						
Total Phosphate	B039693-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040147</b>						
Ammonia as N	B040147-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B040530</b>						
Total Kjeldahl Nitrogen	B040530-BLK1	ND	mg/L	0.20	0.036	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 21:56  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Bear Creek  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B040566</b>						
Ammonia as N	B040566-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/20/2019 21:56  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Bear Creek  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038699</b>										
Chloride	B038699-BS1	LCS	50.263	50.000	mg/L	101		90 - 110		
Nitrate as N	B038699-BS1	LCS	4.9260	5.0000	mg/L	98.5		90 - 110		
Sulfate	B038699-BS1	LCS	99.757	100.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B038889</b>										
Nitrite as N	B038889-BS1	LCS	0.49050	0.50000	mg/L	98.1		90 - 110		
<b>QC Batch ID: B038890</b>										
Nitrite as N	B038890-BS1	LCS	0.49025	0.50000	mg/L	98.1		90 - 110		
<b>QC Batch ID: B038951</b>										
Total Dissolved Solids @ 180 C	B038951-BS1	LCS	605.00	586.00	mg/L	103		90 - 110		
<b>QC Batch ID: B039074</b>										
Dissolved Calcium	B039074-BS1	LCS	9.8620	10.000	mg/L	98.6		85 - 115		
Dissolved Magnesium	B039074-BS1	LCS	10.116	10.000	mg/L	101		85 - 115		
Dissolved Sodium	B039074-BS1	LCS	9.2746	10.000	mg/L	92.7		85 - 115		
Dissolved Potassium	B039074-BS1	LCS	8.7939	10.000	mg/L	87.9		85 - 115		
<b>QC Batch ID: B039692</b>										
Total Kjeldahl Nitrogen	B039692-BS1	LCS	1.9095	2.0000	mg/L	95.5		90 - 110		
<b>QC Batch ID: B039693</b>										
Total Phosphate	B039693-BS1	LCS	2.9905	3.0660	mg/L	97.5		85 - 115		
<b>QC Batch ID: B040147</b>										
Ammonia as N	B040147-BS1	LCS	0.94860	1.0000	mg/L	94.9		90 - 110		
<b>QC Batch ID: B040530</b>										
Total Kjeldahl Nitrogen	B040530-BS1	LCS	1.8951	2.0000	mg/L	94.8		90 - 110		
<b>QC Batch ID: B040566</b>										
Ammonia as N	B040566-BS1	LCS	0.96570	1.0000	mg/L	96.6		90 - 110		

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Luhdorf & Scalmanini
500 First Street
Woodland, CA 95695

Reported: 03/20/2019 21:56
Project: Dairy Rep MP - Expanded Suite
Project Number: Gallo Cattle Company Bear Creek
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes multiple QC batches (B031749, B031750, B038699, B038889, B038890, B038951, B039074) and various chemical constituents like Bicarbonate Alkalinity, Chloride, Nitrate, Sulfate, etc.

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 21:56  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Bear Creek  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B039074</b>		Used client sample: N								
Dissolved Sodium	DUP	1905734-01	54.009	54.224		mg/L	0.4		20	
	MS	1905734-01	54.009	62.871	10.204	mg/L		86.8		85 - 115
	MSD	1905734-01	54.009	61.861	10.204	mg/L	1.6	76.9	20	85 - 115
Dissolved Potassium	DUP	1905734-01	2.5894	2.5978		mg/L	0.3		20	
	MS	1905734-01	2.5894	12.389	10.204	mg/L		96.0		85 - 115
	MSD	1905734-01	2.5894	12.477	10.204	mg/L	0.7	96.9	20	85 - 115
<b>QC Batch ID: B039692</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1905937-01	1.2428	1.1999		mg/L	3.5		20	
	MS	1905937-01	1.2428	3.1099	2.0000	mg/L		93.4		90 - 110
	MSD	1905937-01	1.2428	3.1537	2.0000	mg/L	1.4	95.5	20	90 - 110
<b>QC Batch ID: B039693</b>		Used client sample: N								
Total Phosphate	DUP	1905937-01	5.0347	4.9875		mg/L	0.9		20	
	MS	1905937-01	5.0347	8.1303	3.0660	mg/L		101		80 - 120
	MSD	1905937-01	5.0347	8.0709	3.0660	mg/L	0.7	99.0	20	80 - 120
<b>QC Batch ID: B040147</b>		Used client sample: N								
Ammonia as N	DUP	1905930-04	0.11220	0.12010		mg/L	6.8		10	J
	MS	1905930-04	0.11220	1.1563	1.1111	mg/L		94.0		90 - 110
	MSD	1905930-04	0.11220	1.1886	1.1111	mg/L	2.7	96.9	10	90 - 110
<b>QC Batch ID: B040530</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1906909-02	0.83280	0.86250		mg/L	3.5		20	
	MS	1906909-02	0.83280	2.9402	2.0000	mg/L		105		90 - 110
	MSD	1906909-02	0.83280	2.8558	2.0000	mg/L	2.9	101	20	90 - 110
<b>QC Batch ID: B040566</b>		Used client sample: N								
Ammonia as N	DUP	1906262-01	0.12840	0.11670		mg/L	9.5		10	J
	MS	1906262-01	0.12840	1.2103	1.1111	mg/L		97.4		90 - 110
	MSD	1906262-01	0.12840	1.3021	1.1111	mg/L	7.3	106	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 21:56  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Bear Creek  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Gallo Cattle Company Cottonwood

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1906595

Invoice ID: B334829

Enclosed are the results of analyses for samples received by the laboratory on 3/1/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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### Quality Control Reports

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## Case Narratives

### Case Narrative for Work Order 1906595

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to: 19-06595				Analysis Requested	
Expanded Constituent Suite					
Project: Dairy Representative Monitoring Program					
Client: Gallo Cattle Company Cottonwood					
Sampler Name: Antonio / Del-Tech					
Global ID - GADAIRY00006					
Name	Address	City	State	Attn	Global ID
Lundhoff and Scalfmanini	500 First Street	Woodland	CA	Till Angermann	
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1-Pb Unpreserved
-1	COT-MW1d	3/1/19	1110	GW	x
-2	COT-MW2				x
-3	COT-MW3				x
-4	COT-MW4				x
-5	COT-MW5				x
-6	COT-MW6				x
-7	COT-MW7				x
-8	COT-MW8				x
-9	COT-MW9				x
-10	COT-MW10				x
-11	COT-MW11d				x
-12	COT-MW12d				x
-13	COT-MW13d				x
-14	COT-MW14d				x
-15	Field Duplicate #5				x
-16					
-17					
-18					

  

From Filtered Sample:	From Filtered Sample:	From Unfiltered Sample:
Ammonia-N, NO3-N, NO2-N	Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3

  

Relinquished by: (Signature)	Date & Time
<i>Antonio / Del-Tech</i>	3/1/19 16:46
Relinquished by: (Signature)	Date & Time
<i>Antonio / Del-Tech</i>	3/1/19 2200

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Lundhoff and Scalfmanini Consulting Engineers via email: llavagnino@lscce.com, rbyson@lscce.com, pdhalvhal@lscce.com, jlovelis@lscce.com  
 4) Send invoices to Jeanette Lovell (jlovelis@lscce.com).

(A)= Analyst (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-06595

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: EYES  NO

Emissivity: 0.98 Container: PE Thermometer ID: 708 Date/Time: 3/1/2200

Temperature: (A) 3.1 °C / (C) 3.4 °C Analyst Init: ELC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A	A	A
4oz / 8oz / 16oz PE UNPRES										
2oz Cr*										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GLP Date/Time: 3/1 2215

A = Actual / C = Corrected

Rev 21 05/23/2016 (S:\WPDec\WardPerfect\LAB\_COCS\FORMS\ISS\ANNE Dev 20)



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906595-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	03/01/2019 11:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW1d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906595-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	03/01/2019 10:05
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW7	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906595-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	03/01/2019 09:54
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW9	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906595-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	03/01/2019 09:37
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW10	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906595-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	03/01/2019 10:52
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW11d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1906595-06</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 03/01/2019 22:00
	<b>Project Number:</b> Gallo Cattle Company Cottonwood	<b>Sampling Date:</b> 03/01/2019 11:32
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> COT-MW12d	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Antonio Morales of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1906595-07</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 03/01/2019 22:00
	<b>Project Number:</b> Gallo Cattle Company Cottonwood	<b>Sampling Date:</b> 03/01/2019 11:52
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> COT-MW13d	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Antonio Morales of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1906595-08</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 03/01/2019 22:00
	<b>Project Number:</b> Gallo Cattle Company Cottonwood	<b>Sampling Date:</b> 03/01/2019 10:32
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> COT-MW14d	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Antonio Morales of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1906595-09</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 03/01/2019 22:00
	<b>Project Number:</b> Gallo Cattle Company Cottonwood	<b>Sampling Date:</b> 03/01/2019 00:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Field Duplicate #5	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Antonio Morales of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906595-01	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW1d, 3/1/2019 11:10:00AM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	190	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	71	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	0.15		1
Dissolved Potassium	18	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	580	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	41	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	140	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.68	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.060	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	2.9	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:50	03/08/19 22:55	JRG	PE-OP2	1	B039549
2	SM-2320B	03/06/19 07:00	03/06/19 14:22	MEV	MET-1	2	B031790
3	EPA-300.0	03/01/19 20:00	03/02/19 20:04	SAV	IC8	5	B039130
4	SM-2540C	03/07/19 17:00	03/07/19 17:00	CAD	MANUAL	5	B039634
5	EPA-351.2	03/15/19 20:00	03/18/19 13:49	JMH	SC-1	1	B040509
6	EPA-350.1	03/23/19 10:35	03/23/19 12:04	JMH	SC-1	1	B041208
7	EPA-353.2	03/02/19 01:00	03/02/19 01:00	TMS	KONE-1	1	B039507
8	EPA-365.4	03/15/19 20:00	03/19/19 13:05	JMH	SC-1	1	B040510

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:55  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Gallo Cattle Company Cottonwood  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906595-02	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW7, 3/1/2019 10:05:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	200	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	66	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	160	mg/L	0.50	0.051	EPA-200.7	0.15		1
Dissolved Potassium	58	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	590	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	200	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	56	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	79	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.76	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	9.6	mg/L	0.75	0.25	EPA-365.4	ND	A07	9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:55	03/08/19 22:41	JRG	PE-OP2	1	B039549
2	SM-2320B	03/06/19 07:00	03/06/19 14:28	MEV	MET-1	2	B031790
3	EPA-300.0	03/01/19 20:00	03/02/19 18:21	SAV	IC8	2	B039130
4	EPA-300.0	03/01/19 20:00	03/03/19 00:31	SAV	IC8	5	B039130
5	SM-2540C	03/07/19 17:00	03/07/19 17:00	CAD	MANUAL	10	B039634
6	EPA-351.2	03/15/19 20:00	03/18/19 13:49	JMH	SC-1	1	B040509
7	EPA-350.1	03/23/19 10:35	03/23/19 12:07	JMH	SC-1	1	B041208
8	EPA-353.2	03/02/19 01:00	03/02/19 01:05	TMS	KONE-1	1	B039507
9	EPA-365.4	03/15/19 20:00	03/19/19 13:31	JMH	SC-1	5	B040510

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Woodland, CA 95695

Reported: 03/26/2019 12:55  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Gallo Cattle Company Cottonwood  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906595-03	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW9, 3/1/2019 9:54:00AM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	220	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	55	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	170	mg/L	0.50	0.051	EPA-200.7	0.15		1
Dissolved Potassium	5.7	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	550	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	55	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	140	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.42	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.57	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 13:00	03/08/19 22:44	JRG	PE-OP2	1	B039549
2	SM-2320B	03/06/19 07:00	03/06/19 14:35	MEV	MET-1	2	B031790
3	EPA-300.0	03/01/19 20:00	03/02/19 17:40	SAV	IC8	5	B039130
4	SM-2540C	03/07/19 17:00	03/07/19 17:00	CAD	MANUAL	5	B039634
5	EPA-351.2	03/15/19 20:00	03/18/19 13:51	JMH	SC-1	1	B040509
6	EPA-350.1	03/23/19 10:35	03/23/19 12:09	JMH	SC-1	1	B041208
7	EPA-353.2	03/02/19 01:00	03/02/19 01:05	TMS	KONE-1	1	B039507
8	EPA-365.4	03/15/19 20:00	03/19/19 13:06	JMH	SC-1	1	B040510

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**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906595-04	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW10, 3/1/2019 9:37:00AM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	180	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	68	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	200	mg/L	0.50	0.051	EPA-200.7	0.15		1
Dissolved Potassium	2.8	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	530	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	240	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	26	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	150	mg/L	1.0	0.14	EPA-300.0	ND		4
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.63	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	4.8	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 13:05	03/08/19 22:47	JRG	PE-OP2	1	B039549
2	SM-2320B	03/06/19 07:00	03/06/19 14:42	MEV	MET-1	2	B031790
3	EPA-300.0	03/01/19 20:00	03/03/19 00:10	SAV	IC8	2	B039130
4	EPA-300.0	03/01/19 20:00	03/02/19 18:01	SAV	IC8	1	B039130
5	SM-2540C	03/07/19 17:00	03/07/19 17:00	CAD	MANUAL	10	B039634
6	EPA-351.2	03/15/19 20:00	03/18/19 14:11	JMH	SC-1	1	B040509
7	EPA-350.1	03/23/19 10:35	03/23/19 12:11	JMH	SC-1	1	B041208
8	EPA-353.2	03/02/19 01:00	03/02/19 01:05	TMS	KONE-1	1	B039507
9	EPA-365.4	03/15/19 20:00	03/19/19 13:07	JMH	SC-1	1	B040510

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Reported: 03/26/2019 12:55  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Gallo Cattle Company Cottonwood  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1906595-05		Client Sample Name: Gallo Cattle Company Cottonwood, COT-MW11d, 3/1/2019 10:52:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	42	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	12	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	38	mg/L	0.50	0.051	EPA-200.7	0.059		1
Dissolved Potassium	30	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	190	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	34	mg/L	0.50	0.067	EPA-300.0	ND		3
Nitrate as N	6.2	mg/L	0.10	0.019	EPA-300.0	ND		3
Sulfate	8.4	mg/L	1.0	0.14	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	400	mg/L	20	10	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.24	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	13	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/19/19 09:00	03/19/19 14:06	JRG	PE-OP2	1	B040775
2	SM-2320B	03/06/19 07:00	03/06/19 14:47	MEV	MET-1	1	B031790
3	EPA-300.0	03/01/19 20:00	03/02/19 19:23	SAV	IC8	1	B039130
4	SM-2540C	03/07/19 17:00	03/07/19 17:00	CAD	MANUAL	2	B039634
5	EPA-351.2	03/15/19 20:00	03/18/19 12:14	JMH	SC-1	1	B040511
6	EPA-350.1	03/23/19 10:35	03/23/19 12:12	JMH	SC-1	1	B041208
7	EPA-353.2	03/02/19 01:00	03/02/19 01:05	TMS	KONE-1	1	B039507
8	EPA-365.4	03/15/19 20:00	03/19/19 13:17	JMH	SC-1	5	B040513

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**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1906595-06		Client Sample Name: Gallo Cattle Company Cottonwood, COT-MW12d, 3/1/2019 11:32:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	36	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	120	mg/L	0.50	0.051	EPA-200.7	0.059		1
Dissolved Potassium	12	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	300	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	61	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	94	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.64	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	2.9	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/19/19 09:00	03/19/19 13:36	JRG	PE-OP2	1	B040775
2	SM-2320B	03/06/19 07:00	03/06/19 14:53	MEV	MET-1	2	B031790
3	EPA-300.0	03/01/19 20:00	03/02/19 20:24	SAV	IC8	5	B039130
4	SM-2540C	03/07/19 17:00	03/07/19 17:00	CAD	MANUAL	5	B039634
5	EPA-351.2	03/15/19 20:00	03/18/19 12:18	JMH	SC-1	1	B040511
6	EPA-350.1	03/23/19 10:35	03/23/19 12:13	JMH	SC-1	1	B041208
7	EPA-353.2	03/02/19 01:00	03/02/19 01:05	TMS	KONE-1	1	B039507
8	EPA-365.4	03/15/19 20:00	03/19/19 12:45	JMH	SC-1	1	B040513

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Reported: 03/26/2019 12:55  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Gallo Cattle Company Cottonwood  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906595-07	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW13d, 3/1/2019 11:52:00AM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	35	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	0.15		1
Dissolved Potassium	6.1	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	330	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	100	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	50	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	75	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.69	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	8.2	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 13:20	03/08/19 23:13	JRG	PE-OP2	1	B039549
2	SM-2320B	03/06/19 07:00	03/06/19 13:49	MEV	MET-1	2	B031790
3	EPA-300.0	03/01/19 20:00	03/02/19 20:45	SAV	IC8	5	B039130
4	SM-2540C	03/07/19 17:00	03/07/19 17:00	CAD	MANUAL	5	B039634
5	EPA-351.2	03/15/19 20:00	03/18/19 12:18	JMH	SC-1	1	B040511
6	EPA-350.1	03/23/19 10:35	03/23/19 12:14	JMH	SC-1	1	B041208
7	EPA-353.2	03/02/19 01:00	03/02/19 01:05	TMS	KONE-1	1	B039507
8	EPA-365.4	03/15/19 20:00	03/19/19 13:22	JMH	SC-1	5	B040513

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**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906595-08	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW14d, 3/1/2019 10:32:00AM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	230	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	68	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	210	mg/L	0.50	0.051	EPA-200.7	0.15		1
Dissolved Potassium	9.2	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	600	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	160	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	88	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	81	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.2	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.088	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.51	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.0	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 13:25	03/08/19 23:16	JRG	PE-OP2	1	B039549
2	SM-2320B	03/06/19 07:00	03/06/19 15:30	MEV	MET-1	2	B031791
3	EPA-300.0	03/01/19 20:00	03/02/19 19:43	SAV	IC8	5	B039130
4	SM-2540C	03/07/19 17:00	03/07/19 17:00	CAD	MANUAL	10	B039634
5	EPA-351.2	03/15/19 20:00	03/18/19 12:19	JMH	SC-1	1	B040511
6	EPA-350.1	03/23/19 10:35	03/23/19 12:14	JMH	SC-1	1	B041208
7	EPA-353.2	03/02/19 01:00	03/02/19 01:05	TMS	KONE-1	1	B039507
8	EPA-365.4	03/15/19 20:00	03/19/19 12:47	JMH	SC-1	1	B040513

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**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1906595-09		Client Sample Name: Gallo Cattle Company Cottonwood, Field Duplicate #5, 3/1/2019 12:00:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	220	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	55	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	170	mg/L	0.50	0.051	EPA-200.7	0.15		1
Dissolved Potassium	4.8	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	550	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	55	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	140	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.42	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.62	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 13:30	03/08/19 23:19	JRG	PE-OP2	1	B039549
2	SM-2320B	03/06/19 07:00	03/06/19 15:16	MEV	MET-1	2	B031791
3	EPA-300.0	03/01/19 20:00	03/02/19 21:05	SAV	IC8	5	B039130
4	SM-2540C	03/07/19 17:00	03/07/19 17:00	CAD	MANUAL	5	B039634
5	EPA-351.2	03/15/19 20:00	03/18/19 12:22	JMH	SC-1	1	B040511
6	EPA-350.1	03/23/19 10:35	03/23/19 12:16	JMH	SC-1	1	B041208
7	EPA-353.2	03/02/19 01:00	03/02/19 01:05	TMS	KONE-1	1	B039507
8	EPA-365.4	03/15/19 20:00	03/19/19 12:48	JMH	SC-1	1	B040513

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031790</b>						
Bicarbonate Alkalinity as CaCO3	B031790-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031790-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031790-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031791</b>						
Bicarbonate Alkalinity as CaCO3	B031791-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031791-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031791-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B039130</b>						
Chloride	B039130-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B039130-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B039130-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B039507</b>						
Nitrite as N	B039507-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039549</b>						
Dissolved Calcium	B039549-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039549-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039549-BLK1	0.14617	mg/L	0.50	0.051	J
Dissolved Potassium	B039549-BLK1	0.11745	mg/L	1.0	0.10	J
<b>QC Batch ID: B039634</b>						
Total Dissolved Solids @ 180 C	B039634-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B040509</b>						
Total Kjeldahl Nitrogen	B040509-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040510</b>						
Total Phosphate	B040510-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040511</b>						
Total Kjeldahl Nitrogen	B040511-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040513</b>						
Total Phosphate	B040513-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040775</b>						
Dissolved Calcium	B040775-BLK1	ND	mg/L	0.10	0.016	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B040775</b>						
Dissolved Magnesium	B040775-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B040775-BLK1	0.059273	mg/L	0.50	0.051	J
Dissolved Potassium	B040775-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B041208</b>						
Ammonia as N	B041208-BLK1	ND	mg/L	0.20	0.050	

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Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039130</b>										
Chloride	B039130-BS1	LCS	51.620	50.000	mg/L	103		90 - 110		
Nitrate as N	B039130-BS1	LCS	5.0000	5.0000	mg/L	100		90 - 110		
Sulfate	B039130-BS1	LCS	101.23	100.00	mg/L	101		90 - 110		
<b>QC Batch ID: B039507</b>										
Nitrite as N	B039507-BS1	LCS	0.48838	0.50000	mg/L	97.7		90 - 110		
<b>QC Batch ID: B039549</b>										
Dissolved Calcium	B039549-BS1	LCS	10.807	10.000	mg/L	108		85 - 115		
Dissolved Magnesium	B039549-BS1	LCS	10.312	10.000	mg/L	103		85 - 115		
Dissolved Sodium	B039549-BS1	LCS	10.432	10.000	mg/L	104		85 - 115		
Dissolved Potassium	B039549-BS1	LCS	9.0931	10.000	mg/L	90.9		85 - 115		
<b>QC Batch ID: B039634</b>										
Total Dissolved Solids @ 180 C	B039634-BS1	LCS	600.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B040509</b>										
Total Kjeldahl Nitrogen	B040509-BS1	LCS	1.9126	2.0000	mg/L	95.6		90 - 110		
<b>QC Batch ID: B040510</b>										
Total Phosphate	B040510-BS1	LCS	3.0837	3.0660	mg/L	101		85 - 115		
<b>QC Batch ID: B040511</b>										
Total Kjeldahl Nitrogen	B040511-BS1	LCS	2.0159	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B040513</b>										
Total Phosphate	B040513-BS1	LCS	3.0821	3.0660	mg/L	101		85 - 115		
<b>QC Batch ID: B040775</b>										
Dissolved Calcium	B040775-BS1	LCS	9.8395	10.000	mg/L	98.4		85 - 115		
Dissolved Magnesium	B040775-BS1	LCS	9.8928	10.000	mg/L	98.9		85 - 115		
Dissolved Sodium	B040775-BS1	LCS	9.1914	10.000	mg/L	91.9		85 - 115		
Dissolved Potassium	B040775-BS1	LCS	9.1204	10.000	mg/L	91.2		85 - 115		
<b>QC Batch ID: B041208</b>										
Ammonia as N	B041208-BS1	LCS	0.94270	1.0000	mg/L	94.3		90 - 110		

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Luhdorf & Scalmanini
500 First Street
Woodland, CA 95695

Reported: 03/26/2019 12:55
Project: Dairy Rep MP - Expanded Suite
Project Number: Gallo Cattle Company Cottonwood
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC Batch IDs B031790, B031791, B039130, B039507, B039549, and B039634.

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B040509</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1906593-04	0.47950	0.41530		mg/L	14.3		20	
	MS	1906593-04	0.47950	1.8704	2.0000	mg/L		69.5		Q03
	MSD	1906593-04	0.47950	1.9203	2.0000	mg/L	2.6	72.0	20	90 - 110 Q03
<b>QC Batch ID: B040510</b>		Used client sample: N								
Total Phosphate	DUP	1906593-04	0.091373	0.12111		mg/L	28.0		20	J,A02
	MS	1906593-04	0.091373	3.0883	3.0660	mg/L		97.7		80 - 120
	MSD	1906593-04	0.091373	3.0726	3.0660	mg/L	0.5	97.2	20	80 - 120
<b>QC Batch ID: B040511</b>		Used client sample: Y - Description: COT-MW11d, 03/01/2019 10:52								
Total Kjeldahl Nitrogen	DUP	1906595-05	0.23540	0.20190		mg/L	15.3		20	
	MS	1906595-05	0.23540	2.1300	2.0000	mg/L		94.7		90 - 110
	MSD	1906595-05	0.23540	2.0763	2.0000	mg/L	2.6	92.0	20	90 - 110
<b>QC Batch ID: B040513</b>		Used client sample: Y - Description: COT-MW11d, 03/01/2019 10:52								
Total Phosphate	DUP	1906595-05	12.748	12.451		mg/L	2.4		20	
	MS	1906595-05	12.748	16.052	3.0660	mg/L		108		80 - 120
	MSD	1906595-05	12.748	16.021	3.0660	mg/L	0.2	107	20	80 - 120
<b>QC Batch ID: B040775</b>		Used client sample: Y - Description: COT-MW11d, 03/01/2019 10:52								
Dissolved Calcium	DUP	906595-05RE	42.155	40.707		mg/L	3.5		20	
	MS	906595-05RE	42.155	51.675	10.204	mg/L		93.3		85 - 115
	MSD	906595-05RE	42.155	51.418	10.204	mg/L	0.5	90.8	20	85 - 115
Dissolved Magnesium	DUP	906595-05RE	12.463	12.205		mg/L	2.1		20	
	MS	906595-05RE	12.463	22.055	10.204	mg/L		94.0		85 - 115
	MSD	906595-05RE	12.463	22.062	10.204	mg/L	0.0	94.1	20	85 - 115
Dissolved Sodium	DUP	906595-05RE	37.793	36.873		mg/L	2.5		20	
	MS	906595-05RE	37.793	47.661	10.204	mg/L		96.7		85 - 115
	MSD	906595-05RE	37.793	47.408	10.204	mg/L	0.5	94.2	20	85 - 115
Dissolved Potassium	DUP	906595-05RE	30.112	28.249		mg/L	6.4		20	
	MS	906595-05RE	30.112	39.879	10.204	mg/L		95.7		85 - 115
	MSD	906595-05RE	30.112	40.286	10.204	mg/L	1.0	99.7	20	85 - 115
<b>QC Batch ID: B041208</b>		Used client sample: Y - Description: COT-MW1d, 03/01/2019 11:10								
Ammonia as N	DUP	1906595-01	0.059700	ND		mg/L			10	
	MS	1906595-01	0.059700	1.0807	1.1111	mg/L		91.9		90 - 110
	MSD	1906595-01	0.059700	1.1090	1.1111	mg/L	2.6	94.4	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Cottonwood  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Gallo Cattle Company Santa Rita

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1906593

Invoice ID: B334800

Enclosed are the results of analyses for samples received by the laboratory on 3/1/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1906593

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.				Chain of Custody			
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911				Analysis Requested			
Name: Lundorff and Scalmanini				From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids			
Address: 500 First Street				From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3			
City: Woodland							
State: 95695							
Attn: TILL Angermann							
Project: Dairy Representative Monitoring Program							
Site: Gallo Cattle Company Santa Rita							
Samplers Name: Antonio Del-Tech							
Global ID - GADAIRY0007							
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl Pe Unpreserved	From Filtered Sample:	From Unfiltered Sample:
-1	SAN-MW1d	3/11/19	12:57	GW	x	x	x
-2	SAN-MW2d				x	x	x
-3	SAN-MW3d				x	x	x
-4	SAN-MW4d		14:27		x	x	x
-5	SAN-MW5d		12:22		x	x	x
-6	SAN-MW6d		12:51		x	x	x
-7	SAN-MW7d		13:21		x	x	x
-8	SAN-MW8d		13:37		x	x	x
-9	Field Duplicate				x	x	x
10							
11							
12							

  

Relinquished by: (Signature) <i>Anton H. Menek</i>	3/11/19 6:00	DO	Cl <sub>2</sub>	BOD	MEAS	COT	Date & Time
Relinquished by: (Signature) <i>[Signature]</i>		NO <sub>2</sub>	NO <sub>3</sub>	OP	SS		Date & Time
Relinquished by: (Signature) <i>[Signature]</i>							Date & Time

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Lundorff and Scalmanini Consulting Engineers via email: lavagnino@lscce.com, raryson@lscce.com, pthruwal@lscce.com, jloveis@lscce.com  
 4) Send invoices to Jeanette Lovelis (jloveis@lscce.com).

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 1906593

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  Intact? Yes  No  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: ZOB Date/Time: 3/1/2200

Temperature: (A) 3.1 °C / (C) 3.4 °C Analyst Init: FL

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A				
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/008/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 545										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz IAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GLP Date/Time: 3/1 2215

A = Actual / C = Corrected

Rev 21 05/23/2016  
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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906593-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Santa Rita	<b>Sampling Date:</b>	03/01/2019 13:57
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW1d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906593-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Santa Rita	<b>Sampling Date:</b>	03/01/2019 14:27
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW4d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906593-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Santa Rita	<b>Sampling Date:</b>	03/01/2019 12:22
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW5d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906593-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Santa Rita	<b>Sampling Date:</b>	03/01/2019 12:51
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW6d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906593-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Santa Rita	<b>Sampling Date:</b>	03/01/2019 13:21
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW7d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906593-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Santa Rita	<b>Sampling Date:</b>	03/01/2019 13:37
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW8d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906593-01	<b>Client Sample Name:</b> Gallo Cattle Santa Rita, SAN-MW1d, 3/1/2019 1:57:00PM, Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	100	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	29	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	410	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	4.6	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	900	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	120	mg/L	1.0	0.13	EPA-300.0	0.68	A07	3
Nitrate as N	32	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	120	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.46	mg/L	0.20	0.036	EPA-351.2	0.068		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.19	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:15	03/08/19 21:56	JRG	PE-OP2	1	B039548
2	SM-2320B	03/05/19 15:00	03/05/19 19:36	MEV	MET-1	2	B031787
3	EPA-300.0	03/02/19 12:00	03/02/19 17:59	SAV	IC5	2	B039131
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	10	B039607
5	EPA-351.2	03/14/19 20:30	03/18/19 16:02	JMH	SC-1	1	B040390
6	EPA-350.1	03/23/19 10:34	03/23/19 12:23	JMH	SC-1	1	B041207
7	EPA-353.2	03/02/19 00:55	03/02/19 00:55	TMS	KONE-1	1	B039506
8	EPA-365.4	03/14/19 20:30	03/19/19 10:16	JMH	SC-1	1	B040391

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**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1906593-02		Client Sample Name: Gallo Cattle Santa Rita, SAN-MW4d, 3/1/2019 2:27:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	160	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	48	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	49	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO <sub>3</sub>	490	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO <sub>3</sub>	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO <sub>3</sub>	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	95	mg/L	2.5	0.34	EPA-300.0	1.7	A07	3
Nitrate as N	55	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	53	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.5	mg/L	0.20	0.036	EPA-351.2	0.068		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.076	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	11	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:17	03/08/19 22:09	JRG	PE-OP2	1	B039548
2	SM-2320B	03/05/19 15:00	03/05/19 19:43	MEV	MET-1	2	B031787
3	EPA-300.0	03/02/19 12:00	03/02/19 18:53	SAV	IC5	5	B039131
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	5	B039607
5	EPA-351.2	03/14/19 20:30	03/18/19 16:04	JMH	SC-1	1	B040390
6	EPA-350.1	03/23/19 10:34	03/23/19 12:25	JMH	SC-1	1	B041207
7	EPA-353.2	03/02/19 00:55	03/02/19 00:55	TMS	KONE-1	1	B039506
8	EPA-365.4	03/14/19 20:30	03/19/19 10:49	JMH	SC-1	5	B040391

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**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906593-03	<b>Client Sample Name:</b> Gallo Cattle Santa Rita, SAN-MW5d, 3/1/2019 12:22:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	45	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	180	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	5.0	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	350	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	100	mg/L	2.5	0.34	EPA-300.0	1.7	A07	3
Nitrate as N	62	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	170	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.12	mg/L	0.20	0.036	EPA-351.2	0.068	J	5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.12	mg/L	0.15	0.050	EPA-365.4	ND	J	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:20	03/08/19 22:12	JRG	PE-OP2	1	B039548
2	SM-2320B	03/05/19 15:00	03/05/19 19:50	MEV	MET-1	2	B031787
3	EPA-300.0	03/02/19 12:00	03/02/19 15:36	SAV	IC5	5	B039131
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	5	B039607
5	EPA-351.2	03/14/19 20:30	03/18/19 16:04	JMH	SC-1	1	B040390
6	EPA-350.1	03/23/19 10:34	03/23/19 12:25	JMH	SC-1	1	B041207
7	EPA-353.2	03/02/19 00:55	03/02/19 00:55	TMS	KONE-1	1	B039506
8	EPA-365.4	03/14/19 20:30	03/19/19 10:17	JMH	SC-1	1	B040391

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Reported: 03/26/2019 12:11  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Gallo Cattle Company Santa Rita  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1906593-04	Client Sample Name:	Gallo Cattle Santa Rita, SAN-MW6d, 3/1/2019 12:51:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	210	mg/L	0.10	0.016	EPA-200.7	ND		1	
Dissolved Magnesium	60	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	170	mg/L	0.50	0.051	EPA-200.7	0.12		1	
Dissolved Potassium	4.3	mg/L	1.0	0.10	EPA-200.7	0.12		1	
Bicarbonate Alkalinity as CaCO3	510	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	160	mg/L	2.5	0.34	EPA-300.0	1.7	A07	3	
Nitrate as N	47	mg/L	0.50	0.095	EPA-300.0	ND	A07	3	
Sulfate	180	mg/L	5.0	0.70	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		4	
Total Kjeldahl Nitrogen	0.48	mg/L	0.20	0.036	EPA-351.2	ND		5	
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7	
Total Phosphate	0.091	mg/L	0.15	0.050	EPA-365.4	ND	J	8	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:22	03/08/19 22:15	JRG	PE-OP2	1	B039548
2	SM-2320B	03/05/19 15:00	03/05/19 19:56	MEV	MET-1	2	B031787
3	EPA-300.0	03/02/19 12:00	03/02/19 15:54	SAV	IC5	5	B039131
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	5	B039607
5	EPA-351.2	03/15/19 20:00	03/18/19 13:38	JMH	SC-1	1	B040509
6	EPA-350.1	03/23/19 10:34	03/23/19 12:27	JMH	SC-1	1	B041207
7	EPA-353.2	03/02/19 00:55	03/02/19 00:55	TMS	KONE-1	1	B039506
8	EPA-365.4	03/15/19 20:00	03/19/19 12:59	JMH	SC-1	1	B040510

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**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

BCL Sample ID:	1906593-05	Client Sample Name:	Gallo Cattle Santa Rita, SAN-MW7d, 3/1/2019 1:21:00PM, Antonio Morales					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	39	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	140	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	4.1	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	480	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	77	mg/L	1.0	0.13	EPA-300.0	0.68	A07	3
Nitrate as N	24	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	110	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	920	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.85	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.52	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:25	03/08/19 22:23	JRG	PE-OP2	1	B039548
2	SM-2320B	03/05/19 15:00	03/05/19 20:02	MEV	MET-1	2	B031787
3	EPA-300.0	03/02/19 12:00	03/02/19 18:17	SAV	IC5	2	B039131
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	5	B039607
5	EPA-351.2	03/15/19 20:00	03/18/19 13:42	JMH	SC-1	1	B040509
6	EPA-350.1	03/23/19 10:34	03/23/19 12:27	JMH	SC-1	1	B041207
7	EPA-353.2	03/02/19 00:55	03/02/19 00:55	TMS	KONE-1	1	B039506
8	EPA-365.4	03/15/19 20:00	03/19/19 13:02	JMH	SC-1	1	B040510

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**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1906593-06		Client Sample Name: Gallo Cattle Santa Rita, SAN-MW8d, 3/1/2019 1:37:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	33	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	240	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	3.1	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	600	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	80	mg/L	1.0	0.13	EPA-300.0	0.68	A07	3
Nitrate as N	30	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	100	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.40	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.24	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:30	03/08/19 22:25	JRG	PE-OP2	1	B039548
2	SM-2320B	03/05/19 15:00	03/05/19 19:00	MEV	MET-1	2	B031787
3	EPA-300.0	03/02/19 12:00	03/02/19 18:35	SAV	IC5	2	B039131
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	5	B039607
5	EPA-351.2	03/15/19 20:00	03/18/19 13:43	JMH	SC-1	1	B040509
6	EPA-350.1	03/23/19 10:34	03/23/19 12:29	JMH	SC-1	1	B041207
7	EPA-353.2	03/02/19 00:55	03/02/19 01:00	TMS	KONE-1	1	B039506
8	EPA-365.4	03/15/19 20:00	03/19/19 13:03	JMH	SC-1	1	B040510

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**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031787</b>						
Bicarbonate Alkalinity as CaCO3	B031787-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031787-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031787-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B039131</b>						
Chloride	B039131-BLK1	0.34000	mg/L	0.50	0.067	J
Nitrate as N	B039131-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B039131-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B039506</b>						
Nitrite as N	B039506-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039548</b>						
Dissolved Calcium	B039548-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039548-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039548-BLK1	0.12042	mg/L	0.50	0.051	J
Dissolved Potassium	B039548-BLK1	0.11720	mg/L	1.0	0.10	J
<b>QC Batch ID: B039607</b>						
Total Dissolved Solids @ 180 C	B039607-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B040390</b>						
Total Kjeldahl Nitrogen	B040390-BLK1	0.067600	mg/L	0.20	0.036	J
<b>QC Batch ID: B040391</b>						
Total Phosphate	B040391-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040509</b>						
Total Kjeldahl Nitrogen	B040509-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040510</b>						
Total Phosphate	B040510-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B041207</b>						
Ammonia as N	B041207-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039131</b>										
Chloride	B039131-BS1	LCS	54.323	50.000	mg/L	109		90 - 110		
Nitrate as N	B039131-BS1	LCS	5.3070	5.0000	mg/L	106		90 - 110		
Sulfate	B039131-BS1	LCS	108.59	100.00	mg/L	109		90 - 110		
<b>QC Batch ID: B039506</b>										
Nitrite as N	B039506-BS1	LCS	0.49205	0.50000	mg/L	98.4		90 - 110		
<b>QC Batch ID: B039548</b>										
Dissolved Calcium	B039548-BS1	LCS	10.516	10.000	mg/L	105		85 - 115		
Dissolved Magnesium	B039548-BS1	LCS	10.100	10.000	mg/L	101		85 - 115		
Dissolved Sodium	B039548-BS1	LCS	10.176	10.000	mg/L	102		85 - 115		
Dissolved Potassium	B039548-BS1	LCS	9.2240	10.000	mg/L	92.2		85 - 115		
<b>QC Batch ID: B039607</b>										
Total Dissolved Solids @ 180 C	B039607-BS1	LCS	605.00	586.00	mg/L	103		90 - 110		
<b>QC Batch ID: B040390</b>										
Total Kjeldahl Nitrogen	B040390-BS1	LCS	2.1417	2.0000	mg/L	107		90 - 110		
<b>QC Batch ID: B040391</b>										
Total Phosphate	B040391-BS1	LCS	3.0490	3.0660	mg/L	99.4		85 - 115		
<b>QC Batch ID: B040509</b>										
Total Kjeldahl Nitrogen	B040509-BS1	LCS	1.9126	2.0000	mg/L	95.6		90 - 110		
<b>QC Batch ID: B040510</b>										
Total Phosphate	B040510-BS1	LCS	3.0837	3.0660	mg/L	101		85 - 115		
<b>QC Batch ID: B041207</b>										
Ammonia as N	B041207-BS1	LCS	0.96820	1.0000	mg/L	96.8		90 - 110		

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Luhdorf & Scalmanini
500 First Street
Woodland, CA 95695

Reported: 03/26/2019 12:11
Project: Dairy Rep MP - Expanded Suite
Project Number: Gallo Cattle Company Santa Rita
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Qualls. Includes sections for QC Batch IDs B031787, B039131, B039506, B039548, B039607, and B040390.

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Luhdorf & Scalmanini  
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Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B040391</b>		Used client sample: N								
Total Phosphate	DUP	1906591-04	0.091373	0.071442		mg/L	24.5		20	J
	MS	1906591-04	0.091373	3.3075	3.0660	mg/L		105	80 - 120	
	MSD	1906591-04	0.091373	3.2333	3.0660	mg/L	2.3	102	20	80 - 120
<b>QC Batch ID: B040509</b>		Used client sample: Y - Description: SAN-MW6d, 03/01/2019 12:51								
Total Kjeldahl Nitrogen	DUP	1906593-04	0.47950	0.41530		mg/L	14.3		20	
	MS	1906593-04	0.47950	1.8704	2.0000	mg/L		69.5	90 - 110	Q03
	MSD	1906593-04	0.47950	1.9203	2.0000	mg/L	2.6	72.0	20	90 - 110
<b>QC Batch ID: B040510</b>		Used client sample: Y - Description: SAN-MW6d, 03/01/2019 12:51								
Total Phosphate	DUP	1906593-04	0.091373	0.12111		mg/L	28.0		20	J,A02
	MS	1906593-04	0.091373	3.0883	3.0660	mg/L		97.7	80 - 120	
	MSD	1906593-04	0.091373	3.0726	3.0660	mg/L	0.5	97.2	20	80 - 120
<b>QC Batch ID: B041207</b>		Used client sample: N								
Ammonia as N	DUP	1906592-05	ND	ND		mg/L			10	
	MS	1906592-05	ND	1.1168	1.1111	mg/L		101	90 - 110	
	MSD	1906592-05	ND	1.1217	1.1111	mg/L	0.4	101	10	90 - 110

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 03/20/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Genasci Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905315

Invoice ID: B333295

Enclosed are the results of analyses for samples received by the laboratory on 2/19/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000863541

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905315

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		Chain of Custody						
19-05315		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911						
Report to:								
Expanded Constituent Suite								
Name:	Luhdorff and Scalimanni	Project:	Dairy Representative Monitoring Program					
Address:	500 First Street	Site:	Gehasci Dairy					
City:	Woodland	Samplers Name:	Antonio Del-Tech					
State:	95695	Global ID - WDD:	10000659					
Attn:	Till Angermann							
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qt Pe Unpreserved	From Filtered Sample:	From Filtered Sample:	From Unfiltered Sample:
-1	GEN-MW1	2/19/19	1411	6W	x	x	x	Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
-2	GEN-MW2		1513		x	x	x	
-3	GEN-MW3		1347		x	x	x	
-4	GEN-MW5		1451		x	x	x	
-5	GEN-MW6		1722		x	x	x	
-6	GEN-MW7		1429		x	x	x	
-7	GEN-MW8		1536		x	x	x	
-8	GEN-MW9		1641		x	x	x	
-9	GEN-MW10		1559		x	x	x	
-10	GEN-MW11s, GEN-MW14d		1617		x	x	x	
-11	GEN-MW12s, GEN-MW12d		1700		x	x	x	
12	Field-Duplicate				x	x	x	
13								
14								
15								

  

Relinquished by: (Signature)	Relinquished by: (Signature)	Received By: (Signature)	Date & Time
[Signature]	[Signature]	[Signature]	2/19/19 17:40
Relinquished by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)	Date & Time
[Signature]	[Signature]	[Signature]	2/19/19 2200
Relinquished by: (Signature)	Relinquished by: (Signature)	Received By: (Signature)	Date & Time
[Signature]	[Signature]	[Signature]	

  

**Comments:**

- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Luhdorff and Scalimanni Consulting Engineers via email: jlavagnino@lsce.com, rbryson@lsce.com, pdhalliwal@lsce.com.
- Send invoices to Jeannette Loyells (jlovelis@lsce.com).

(A)= Analysis (C)= Container (P)= Preservative

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## Chain of Custody and Cooler Receipt Form for 1905315 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #: 19-05315

<b>SHIPPING INFORMATION</b> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		<b>SHIPPING CONTAINER</b> Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		<b>FREE LIQUID</b> YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
---	--	---	--	---

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO

Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/19/200  
 Temperature: (A) 2.0 °C / (C) 2.5 °C Analyst Init: ENK

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A	A	A
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 563/608/6080										
QT EPA 515.L0150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

SHOW HOLDING TIME OF SS

C<sup>6</sup> NO<sup>2</sup> NO<sup>3</sup>

DO Cl<sub>2</sub> BOD MBAS COC

SHIPPED BY DISTRIBUTION

INVENTORY

SUB-OUT

ENK

Comments: \_\_\_\_\_

Sample Numbering Completed By: ENK Date/Time: 2-19-19 1230 Rev 21 05/23/2016  
 A = Actual / C = Corrected

(S:\WPDec\WordPerfect\LAJ\_DOC\FORMS\ISAMR2Cre 20)



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 19-00315

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time 2/19 2200  
 Temperature: (A) 2.0 °C / (C) 2.5 °C Analyst Init ENK

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/018/0180										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 511.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: ENK Date/Time: 2-19-15 2230 Rev 21 05/23/2016  
 A = Actual / C = Corrected (S:\WP\Doc\Wes\Perfect\LAB\_DOC\FORMS\SAMR\REV 20)



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905315-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 14:11
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905315-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 15:13
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905315-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 13:47
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905315-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 14:51
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW5	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905315-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 17:22
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW6	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905315-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 14:29
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW7	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905315-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 15:36
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW8	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905315-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 16:41
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW9	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905315-09	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 15:59
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW10	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905315-10	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 16:17
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW11s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905315-11	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/19/2019 22:00
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	02/19/2019 17:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW12s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/20/2019 14:04  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Genasci Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905315-01	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW1, 2/19/2019 2:11:00PM, Del-Tech/Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	230	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	180	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	160	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	42	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	1300	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	330	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	0.88	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	65	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1900	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	5.9	mg/L	1.0	0.18	EPA-351.2	ND	A07	5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.023	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	4.4	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 14:30	02/26/19 15:47	JRG	PE-OP2	1	B038578
2	SM-2320B	02/21/19 12:00	02/21/19 15:29	MEV	MET-1	2	B031721
3	EPA-300.0	02/20/19 13:00	02/20/19 15:09	SAV	IC8	2	B038145
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	10	B038376
5	EPA-351.2	02/27/19 20:30	03/04/19 13:00	JMH	SC-1	5	B038853
6	EPA-350.1	03/06/19 12:38	03/07/19 10:33	JMH	SC-1	1	B039436
7	EPA-353.2	02/20/19 08:56	02/20/19 09:39	MC1	KONE-1	1	B038399
8	EPA-365.4	02/27/19 20:30	03/04/19 13:37	JMH	SC-1	1	B038854

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905315-02	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW2, 2/19/2019 3:13:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	190	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	140	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	110	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	7.7	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	800	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	200	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	55	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	77	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.83	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.070	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.33	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.2	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 14:35	02/26/19 16:00	JRG	PE-OP2	1	B038578
2	SM-2320B	02/21/19 12:00	02/21/19 15:15	MEV	MET-1	2	B031721
3	EPA-300.0	02/20/19 13:00	02/21/19 02:27	SAV	IC8	5	B038145
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	10	B038376
5	EPA-351.2	02/27/19 20:30	03/04/19 11:20	JMH	SC-1	1	B038853
6	EPA-350.1	03/06/19 12:38	03/07/19 10:35	JMH	SC-1	1	B039436
7	EPA-353.2	02/20/19 08:56	02/20/19 09:53	MC1	KONE-1	1	B038399
8	EPA-365.4	02/27/19 20:30	03/04/19 13:39	JMH	SC-1	1	B038854

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905315-03	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW3, 2/19/2019 1:47:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	330	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	290	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	400	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	830	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	2100	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	430	mg/L	10	1.3	EPA-300.0	ND	A07	3
Nitrate as N	340	mg/L	2.0	0.38	EPA-300.0	ND	A07	3
Sulfate	330	mg/L	20	2.8	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	5400	mg/L	500	250	SM-2540C	ND		4
Total Kjeldahl Nitrogen	5.5	mg/L	1.0	0.18	EPA-351.2	ND	A07	5
Ammonia as N	0.27	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.55	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	3.0	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 14:40	02/26/19 16:03	JRG	PE-OP2	1	B038578
2	SM-2320B	02/21/19 12:00	02/21/19 15:38	MEV	MET-1	2	B031721
3	EPA-300.0	02/20/19 13:00	02/20/19 16:52	EMM	IC8	20	B038145
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	50	B038376
5	EPA-351.2	02/27/19 20:30	03/04/19 12:14	JMH	SC-1	5	B038853
6	EPA-350.1	03/06/19 12:38	03/07/19 10:35	JMH	SC-1	1	B039436
7	EPA-353.2	02/20/19 08:56	02/20/19 09:53	MC1	KONE-1	1	B038399
8	EPA-365.4	02/27/19 20:30	03/04/19 13:40	JMH	SC-1	1	B038854

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905315-04	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW5, 2/19/2019 2:51:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	210	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	120	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	91	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	30	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	420	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	71	mg/L	5.0	0.67	EPA-300.0	ND	A07	3
Nitrate as N	150	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	120	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	2.1	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.18	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.8	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 14:42	02/26/19 16:11	JRG	PE-OP2	1	B038578
2	SM-2320B	02/21/19 12:00	02/21/19 15:48	MEV	MET-1	2	B031721
3	EPA-300.0	02/20/19 13:00	02/21/19 02:47	SAV	IC8	10	B038145
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	10	B038376
5	EPA-351.2	02/27/19 20:30	03/04/19 11:24	JMH	SC-1	1	B038853
6	EPA-350.1	03/06/19 12:38	03/07/19 10:37	JMH	SC-1	1	B039436
7	EPA-353.2	02/20/19 08:56	02/20/19 09:53	MC1	KONE-1	1	B038399
8	EPA-365.4	02/27/19 20:30	03/04/19 13:41	JMH	SC-1	1	B038854

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905315-05	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW6, 2/19/2019 5:22:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	45	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	46	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	4.7	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	460	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	34	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	25	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	29	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	780	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.74	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.4	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 14:45	02/26/19 16:15	JRG	PE-OP2	1	B038578
2	SM-2320B	02/21/19 12:00	02/21/19 15:55	MEV	MET-1	2	B031721
3	EPA-300.0	02/20/19 13:00	02/20/19 17:33	KEB	IC8	2	B038145
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	5	B038376
5	EPA-351.2	02/27/19 20:30	03/04/19 11:25	JMH	SC-1	1	B038853
6	EPA-350.1	03/06/19 12:38	03/07/19 10:37	JMH	SC-1	1	B039436
7	EPA-353.2	02/20/19 08:56	02/20/19 09:39	MC1	KONE-1	1	B038399
8	EPA-365.4	02/27/19 20:30	03/04/19 13:42	JMH	SC-1	1	B038854

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905315-06	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW7, 2/19/2019 2:29:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	99	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	47	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	35	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.8	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	330	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	20	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	30	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	33	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	650	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	ND	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.070	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.33	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 14:50	02/26/19 16:18	JRG	PE-OP2	1	B038578
2	SM-2320B	02/21/19 12:00	02/21/19 16:01	MEV	MET-1	1	B031721
3	EPA-300.0	02/20/19 13:00	02/21/19 03:08	SAV	IC8	2	B038145
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	3.333	B038376
5	EPA-351.2	02/27/19 20:30	03/04/19 11:25	JMH	SC-1	1	B038853
6	EPA-350.1	03/06/19 12:43	03/07/19 10:46	JMH	SC-1	1	B039437
7	EPA-353.2	02/20/19 08:56	02/20/19 09:43	MC1	KONE-1	1	B038399
8	EPA-365.4	02/27/19 20:30	03/04/19 13:43	JMH	SC-1	1	B038854

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905315-07	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW8, 2/19/2019 3:36:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	320	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	250	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	200	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	100	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	2300	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	270	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	30	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	33	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2400	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	62	mg/L	10	1.8	EPA-351.2	ND	A07	5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.13	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.42	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 14:52	02/26/19 16:20	JRG	PE-OP2	1	B038578
2	SM-2320B	02/21/19 12:00	02/21/19 16:07	MEV	MET-1	2	B031721
3	EPA-300.0	02/20/19 13:00	02/20/19 18:55	KEB	IC8	2	B038145
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	20	B038376
5	EPA-351.2	02/27/19 20:30	03/04/19 12:58	JMH	SC-1	50	B038853
6	EPA-350.1	03/06/19 12:43	03/07/19 10:47	JMH	SC-1	1	B039437
7	EPA-353.2	02/20/19 08:56	02/20/19 09:43	MC1	KONE-1	1	B038399
8	EPA-365.4	02/27/19 20:30	03/04/19 13:43	JMH	SC-1	1	B038854

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905315-08	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW9, 2/19/2019 4:41:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	120	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	47	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	72	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	180	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	380	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	76	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	86	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	59	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	2.2	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.32	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	30	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 14:55	02/26/19 16:23	JRG	PE-OP2	1	B038578
2	SM-2320B	02/21/19 12:00	02/21/19 16:16	MEV	MET-1	2	B031721
3	EPA-300.0	02/20/19 13:00	02/20/19 19:16	KEB	IC8	5	B038145
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	5	B038376
5	EPA-351.2	02/27/19 20:30	03/04/19 11:27	JMH	SC-1	1	B038853
6	EPA-350.1	03/06/19 12:43	03/07/19 10:48	JMH	SC-1	1	B039437
7	EPA-353.2	02/20/19 08:56	02/20/19 09:43	MC1	KONE-1	1	B038399
8	EPA-365.4	02/27/19 20:30	03/04/19 14:10	JMH	SC-1	5	B038854

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500 First Street  
Woodland, CA 95695

Reported: 03/20/2019 14:04  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Genasci Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905315-09	Client Sample Name:	Genasci Dairy, GEN-MW10, 2/19/2019 3:59:00PM, Del-Tech/Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	190	mg/L	0.10	0.016	EPA-200.7	ND		1	
Dissolved Magnesium	140	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	93	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	34	mg/L	1.0	0.10	EPA-200.7	ND		1	
Bicarbonate Alkalinity as CaCO3	860	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	160	mg/L	1.0	0.13	EPA-300.0	ND	A07	3	
Nitrate as N	36	mg/L	0.20	0.038	EPA-300.0	ND	A07	3	
Sulfate	68	mg/L	2.0	0.28	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		4	
Total Kjeldahl Nitrogen	1.6	mg/L	0.20	0.036	EPA-351.2	ND		5	
Ammonia as N	0.10	mg/L	0.20	0.050	EPA-350.1	ND	J	6	
Nitrite as N	0.62	mg/L	0.050	0.010	EPA-353.2	ND		7	
Total Phosphate	2.8	mg/L	0.15	0.050	EPA-365.4	ND		8	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:00	02/26/19 16:26	JRG	PE-OP2	1	B038578
2	SM-2320B	02/21/19 12:00	02/21/19 16:22	MEV	MET-1	2	B031721
3	EPA-300.0	02/20/19 13:00	02/21/19 03:28	SAV	IC8	2	B038145
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	10	B038376
5	EPA-351.2	02/27/19 20:30	03/04/19 12:25	JMH	SC-1	1	B038853
6	EPA-350.1	03/06/19 12:43	03/07/19 10:49	JMH	SC-1	1	B039437
7	EPA-353.2	02/20/19 08:56	02/20/19 09:43	MC1	KONE-1	1	B038399
8	EPA-365.4	02/27/19 20:30	03/04/19 13:45	JMH	SC-1	1	B038854

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905315-10	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW11s, 2/19/2019 4:17:00PM, Del-Tech/Antonio Morales
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	67	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	63	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	160	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	350	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	67	mg/L	5.0	0.67	EPA-300.0	ND	A07	3
Nitrate as N	110	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	87	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1500	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	3.6	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.14	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.18	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	38	mg/L	3.0	1.0	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:05	02/26/19 16:28	JRG	PE-OP2	1	B038578
2	SM-2320B	02/21/19 12:00	02/21/19 16:28	MEV	MET-1	2	B031721
3	EPA-300.0	02/20/19 13:00	02/20/19 19:57	EMM	IC8	10	B038145
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	5	B038376
5	EPA-351.2	02/27/19 20:30	03/04/19 11:29	JMH	SC-1	1	B038853
6	EPA-350.1	03/06/19 12:43	03/07/19 10:50	JMH	SC-1	1	B039437
7	EPA-353.2	02/20/19 08:56	02/20/19 09:43	MC1	KONE-1	1	B038399
8	EPA-365.4	02/27/19 20:30	03/04/19 14:24	JMH2	SC-1	20	B038854

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Reported: 03/20/2019 14:04  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Genasci Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905315-11	Client Sample Name:	Genasci Dairy, GEN-MW12s, 2/19/2019 5:00:00PM, Del-Tech/Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	97	mg/L	0.10	0.016	EPA-200.7	ND		1	
Dissolved Magnesium	99	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	66	mg/L	0.50	0.051	EPA-200.7	0.092		1	
Dissolved Potassium	5.7	mg/L	1.0	0.10	EPA-200.7	0.15		1	
Bicarbonate Alkalinity as CaCO3	410	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	33	mg/L	2.5	0.34	EPA-300.0	ND	A07	3	
Nitrate as N	70	mg/L	0.50	0.095	EPA-300.0	ND	A07	3	
Sulfate	81	mg/L	5.0	0.70	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		4	
Total Kjeldahl Nitrogen	0.78	mg/L	0.20	0.036	EPA-351.2	ND		5	
Ammonia as N	0.057	mg/L	0.20	0.050	EPA-350.1	ND	J	6	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7	
Total Phosphate	0.57	mg/L	0.15	0.050	EPA-365.4	ND		8	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/20/19 15:10	02/26/19 18:52	JRG	PE-OP2	1	B038579
2	SM-2320B	02/21/19 14:00	02/21/19 16:52	MEV	MET-1	2	B031722
3	EPA-300.0	02/20/19 13:00	02/20/19 20:58	EMM	IC8	5	B038146
4	SM-2540C	02/22/19 16:00	02/22/19 16:00	CAD	MANUAL	5	B038377
5	EPA-351.2	02/27/19 20:30	03/01/19 13:36	JMH	SC-1	1	B038851
6	EPA-350.1	03/06/19 12:43	03/07/19 10:51	JMH	SC-1	1	B039437
7	EPA-353.2	02/20/19 08:56	02/20/19 09:21	MC1	KONE-1	1	B038398
8	EPA-365.4	02/27/19 20:30	03/04/19 10:15	JMH	SC-1	1	B038852

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031721</b>						
Bicarbonate Alkalinity as CaCO3	B031721-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031721-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031721-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031722</b>						
Bicarbonate Alkalinity as CaCO3	B031722-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031722-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031722-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038145</b>						
Chloride	B038145-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038145-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038145-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038146</b>						
Chloride	B038146-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038146-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038146-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038376</b>						
Total Dissolved Solids @ 180 C	B038376-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038377</b>						
Total Dissolved Solids @ 180 C	B038377-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038398</b>						
Nitrite as N	B038398-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038399</b>						
Nitrite as N	B038399-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038578</b>						
Dissolved Calcium	B038578-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038578-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038578-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038578-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B038579</b>						
Dissolved Calcium	B038579-BLK1	ND	mg/L	0.10	0.016	

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B038579</b>						
Dissolved Magnesium	B038579-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038579-BLK1	0.091905	mg/L	0.50	0.051	J
Dissolved Potassium	B038579-BLK1	0.15329	mg/L	1.0	0.10	J
<b>QC Batch ID: B038851</b>						
Total Kjeldahl Nitrogen	B038851-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B038852</b>						
Total Phosphate	B038852-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B038853</b>						
Total Kjeldahl Nitrogen	B038853-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B038854</b>						
Total Phosphate	B038854-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039436</b>						
Ammonia as N	B039436-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B039437</b>						
Ammonia as N	B039437-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038145</b>										
Chloride	B038145-BS1	LCS	51.639	50.000	mg/L	103		90 - 110		
Nitrate as N	B038145-BS1	LCS	5.0890	5.0000	mg/L	102		90 - 110		
Sulfate	B038145-BS1	LCS	101.88	100.00	mg/L	102		90 - 110		
<b>QC Batch ID: B038146</b>										
Chloride	B038146-BS1	LCS	51.615	50.000	mg/L	103		90 - 110		
Nitrate as N	B038146-BS1	LCS	5.0840	5.0000	mg/L	102		90 - 110		
Sulfate	B038146-BS1	LCS	101.78	100.00	mg/L	102		90 - 110		
<b>QC Batch ID: B038376</b>										
Total Dissolved Solids @ 180 C	B038376-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B038377</b>										
Total Dissolved Solids @ 180 C	B038377-BS1	LCS	570.00	586.00	mg/L	97.3		90 - 110		
<b>QC Batch ID: B038398</b>										
Nitrite as N	B038398-BS1	LCS	0.52347	0.50000	mg/L	105		90 - 110		
<b>QC Batch ID: B038399</b>										
Nitrite as N	B038399-BS1	LCS	0.53737	0.50000	mg/L	107		90 - 110		
<b>QC Batch ID: B038578</b>										
Dissolved Calcium	B038578-BS1	LCS	10.023	10.000	mg/L	100		85 - 115		
Dissolved Magnesium	B038578-BS1	LCS	10.054	10.000	mg/L	101		85 - 115		
Dissolved Sodium	B038578-BS1	LCS	8.9760	10.000	mg/L	89.8		85 - 115		
Dissolved Potassium	B038578-BS1	LCS	9.3097	10.000	mg/L	93.1		85 - 115		
<b>QC Batch ID: B038579</b>										
Dissolved Calcium	B038579-BS1	LCS	10.174	10.000	mg/L	102		85 - 115		
Dissolved Magnesium	B038579-BS1	LCS	10.064	10.000	mg/L	101		85 - 115		
Dissolved Sodium	B038579-BS1	LCS	9.2456	10.000	mg/L	92.5		85 - 115		
Dissolved Potassium	B038579-BS1	LCS	9.4817	10.000	mg/L	94.8		85 - 115		
<b>QC Batch ID: B038851</b>										
Total Kjeldahl Nitrogen	B038851-BS1	LCS	2.1510	2.0000	mg/L	108		90 - 110		
<b>QC Batch ID: B038852</b>										
Total Phosphate	B038852-BS1	LCS	3.1281	3.0660	mg/L	102		85 - 115		
<b>QC Batch ID: B038853</b>										
Total Kjeldahl Nitrogen	B038853-BS1	LCS	1.9730	2.0000	mg/L	98.6		90 - 110		
<b>QC Batch ID: B038854</b>										

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**Reported:** 03/20/2019 14:04  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Genasci Dairy  
Project Manager: Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B038854</b>										
Total Phosphate	B038854-BS1	LCS	2.9534	3.0660	mg/L	96.3		85 - 115		
<b>QC Batch ID: B039436</b>										
Ammonia as N	B039436-BS1	LCS	0.97000	1.0000	mg/L	97.0		90 - 110		
<b>QC Batch ID: B039437</b>										
Ammonia as N	B039437-BS1	LCS	0.97180	1.0000	mg/L	97.2		90 - 110		

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**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits			Lab Quals
								Percent Recovery	RPD	Percent Recovery	
<b>QC Batch ID: B031721</b>		Used client sample: N									
Bicarbonate Alkalinity as CaCO3	DUP	1905315-02	804.78	802.96		mg/L	0.2			10	
Carbonate Alkalinity as CaCO3	DUP	1905315-02	ND	ND		mg/L				10	
Hydroxide Alkalinity as CaCO3	DUP	1905315-02	ND	ND		mg/L				10	
<b>QC Batch ID: B031722</b>		Used client sample: N									
Bicarbonate Alkalinity as CaCO3	DUP	1905315-11	413.19	411.67		mg/L	0.4			10	
Carbonate Alkalinity as CaCO3	DUP	1905315-11	ND	ND		mg/L				10	
Hydroxide Alkalinity as CaCO3	DUP	1905315-11	ND	ND		mg/L				10	
<b>QC Batch ID: B038145</b>		Used client sample: Y - Description: GEN-MW1, 02/19/2019 14:11									
Chloride	DUP	1905315-01	325.82	327.70		mg/L	0.6			10	
	MS	1905315-01	325.82	422.79	101.01	mg/L		96.0			80 - 120
	MSD	1905315-01	325.82	422.61	101.01	mg/L	0.0	95.8	10		80 - 120
Nitrate as N	DUP	1905315-01	0.88000	0.82800		mg/L	6.1			10	
	MS	1905315-01	0.88000	11.378	10.101	mg/L		104			80 - 120
	MSD	1905315-01	0.88000	11.495	10.101	mg/L	1.0	105	10		80 - 120
Sulfate	DUP	1905315-01	65.222	64.568		mg/L	1.0			10	
	MS	1905315-01	65.222	283.84	202.02	mg/L		108			80 - 120
	MSD	1905315-01	65.222	284.02	202.02	mg/L	0.1	108	10		80 - 120
<b>QC Batch ID: B038146</b>		Used client sample: Y - Description: GEN-MW12s, 02/19/2019 17:00									
Chloride	DUP	1905315-11	32.960	32.785		mg/L	0.5			10	
	MS	1905315-11	32.960	305.84	252.53	mg/L		108			80 - 120
	MSD	1905315-11	32.960	305.70	252.53	mg/L	0.0	108	10		80 - 120
Nitrate as N	DUP	1905315-11	69.970	69.855		mg/L	0.2			10	
	MS	1905315-11	69.970	95.939	25.253	mg/L		103			80 - 120
	MSD	1905315-11	69.970	96.116	25.253	mg/L	0.2	104	10		80 - 120
Sulfate	DUP	1905315-11	80.765	80.505		mg/L	0.3			10	
	MS	1905315-11	80.765	619.23	505.05	mg/L		107			80 - 120
	MSD	1905315-11	80.765	622.36	505.05	mg/L	0.5	107	10		80 - 120
<b>QC Batch ID: B038376</b>		Used client sample: N									
Total Dissolved Solids @ 180 C	DUP	1905315-01	1880.0	1830.0		mg/L	2.7			10	
<b>QC Batch ID: B038377</b>		Used client sample: N									
Total Dissolved Solids @ 180 C	DUP	1905315-11	1045.0	1065.0		mg/L	1.9			10	
<b>QC Batch ID: B038398</b>		Used client sample: N									
Nitrite as N	DUP	1905299-01	ND	ND		mg/L				10	
	MS	1905299-01	ND	0.53834	0.52632	mg/L		102			90 - 110
	MSD	1905299-01	ND	0.54157	0.52632	mg/L	0.6	103	10		90 - 110

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Luhdorf & Scalmanini
500 First Street
Woodland, CA 95695

Reported: 03/20/2019 14:04
Project: Dairy Rep MP - Expanded Suite
Project Number: Genasci Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Control Limits Percent Recovery, Lab Qualls. Includes QC Batch IDs B038399, B038578, B038579, B038851, and B038852.

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500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab
									RPD	Percent Recovery	
<b>QC Batch ID: B038853</b>		Used client sample: Y - Description: GEN-MW1, 02/19/2019 14:11									
Total Kjeldahl Nitrogen	DUP	1905315-01	5.9485	5.9220		mg/L	0.4		20		
	MS	1905315-01	5.9485	8.1155	2.0000	mg/L		108		90 - 110	
	MSD	1905315-01	5.9485	7.9825	2.0000	mg/L	1.7	102	20	90 - 110	
<b>QC Batch ID: B038854</b>		Used client sample: Y - Description: GEN-MW1, 02/19/2019 14:11									
Total Phosphate	DUP	1905315-01	4.4190	4.3745		mg/L	1.0		20		
	MS	1905315-01	4.4190	7.4864	3.0660	mg/L		100		80 - 120	
	MSD	1905315-01	4.4190	7.5116	3.0660	mg/L	0.3	101	20	80 - 120	
<b>QC Batch ID: B039436</b>		Used client sample: N									
Ammonia as N	DUP	1905299-08	0.058600	0.063000		mg/L	7.2		10		J
	MS	1905299-08	0.058600	1.1090	1.1111	mg/L		94.5		90 - 110	
	MSD	1905299-08	0.058600	1.1861	1.1111	mg/L	6.7	101	10	90 - 110	
<b>QC Batch ID: B039437</b>		Used client sample: N									
Ammonia as N	DUP	1905496-02	0.14380	0.12530		mg/L	13.7		10		J,A02
	MS	1905496-02	0.14380	1.2398	1.1111	mg/L		98.6		90 - 110	
	MSD	1905496-02	0.14380	1.2086	1.1111	mg/L	2.6	95.8	10	90 - 110	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/20/2019 14:04  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 03/18/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: J. Troost Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905805

Invoice ID: B333884

Enclosed are the results of analyses for samples received by the laboratory on 2/22/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905805

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		Chain of Custody	
19-05805		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911	
Report to:			
Expanded Constituent Suite			
Project: Dairy Representative Monitoring Program			
Site: J. Troost Dairy			
Samplers Name: Antonio Del-Tech			
Global ID - WDR10039424			
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled
-1	TRO-MW1	2/22/19	1600
-2	TRO-MW2	I	1447
-3	TRO-MW3	I	1526
4	Field-Duplicate		
5			
6			
7			
8			
9			
10			
11			
12			

  

Analysis Requested	
From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
From Filtered Sample: Ammonia-N, NO3-N, NO2-N	

  

SHORT HOLDING TIME	
Cr <sup>6+</sup> (NO <sub>2</sub> )	(NO <sub>3</sub> )
DO	Cl <sub>2</sub>
BOD	MBAS
COT	

  

CHECK BY DISTRIBUTION	
CK	DIS
BY	DISTRIBUTION
	SUB-OUT

  

Relinquished by: (Signature)	
<i>H. H. Mel</i>	2/22/19 1630
Relinquished by: (Signature)	
<i>[Signature]</i>	2000
Relinquished by: (Signature)	
<i>[Signature]</i>	2/22/19 2000

  

Comments:  
 1) Where indicated, samples shall be filtered (0.45um) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luidorf and Scalmanini Consulting Engineers via email: llvagnino@lscce.com, rbryson@lscce.com, pfallisw@lscce.com.  
 4) Send invoices to Jeanette Lovells (jlovels@lscce.com).

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-05805

<b>SHIPPING INFORMATION</b> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		<b>SHIPPING CONTAINER</b> Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		<b>FREE LIQUID</b> YES <input type="checkbox"/> NO <input type="checkbox"/> W / S	
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments: _____					
Custody Seals Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments: _____ Intact? Yes <input type="checkbox"/> No <input type="checkbox"/> Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>					
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<b>COC Received</b> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.98</u> Container: <u>PE</u> Thermometer ID: <u>208</u> Temperature: (A) <u>0.7</u> °C / (C) <u>1.0</u> °C		Date/Time <u>2/22/2000</u> Analyst Init <u>GSP</u>	

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GSP Date/Time: 2-22-00 2030

A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 10:28  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905805-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/22/2019 20:00
	<b>Project Number:</b>	J. Troost Dairy	<b>Sampling Date:</b>	02/22/2019 16:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TRO-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905805-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/22/2019 20:00
	<b>Project Number:</b>	J. Troost Dairy	<b>Sampling Date:</b>	02/22/2019 14:47
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TRO-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905805-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/22/2019 20:00
	<b>Project Number:</b>	J. Troost Dairy	<b>Sampling Date:</b>	02/22/2019 15:26
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TRO-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 10:28  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905805-01		Client Sample Name: J. Troost Dairy, TRO-MW1, 2/22/2019 4:00:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	36	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	53	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.8	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	420	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	97	mg/L	0.50	0.077	EPA-300.0	ND		3
Nitrate as N	13	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	22	mg/L	1.0	0.13	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	740	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.70	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.085	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	5.5	mg/L	0.30	0.10	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/25/19 13:55	03/01/19 19:20	JRG	PE-OP2	1	B039075
2	SM-2320B	02/26/19 07:00	02/26/19 13:43	MEV	MET-1	1	B031742
3	EPA-300.0	02/22/19 23:30	02/23/19 02:50	EMM	IC8	1	B038468
4	SM-2540C	02/26/19 15:00	02/26/19 15:00	CAD	MANUAL	5	B038690
5	EPA-351.2	03/05/19 20:30	03/07/19 08:16	JMH	SC-1	1	B039415
6	EPA-350.1	03/12/19 13:00	03/14/19 08:55	JMH	SC-1	1	B040032
7	EPA-353.2	02/22/19 23:00	02/22/19 23:03	KEB	KONE-1	1	B038558
8	EPA-365.4	03/05/19 20:30	03/06/19 13:25	JMH	SC-1	2	B039416

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500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 10:28  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905805-02		Client Sample Name: J. Troost Dairy, TRO-MW2, 2/22/2019 2:47:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	220	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	43	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	66	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	4.5	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	280	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	130	mg/L	5.0	0.77	EPA-300.0	ND	A07	3
Nitrate as N	94	mg/L	1.0	0.21	EPA-300.0	ND	A07	3
Sulfate	29	mg/L	10	1.3	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.10	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	0.10	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.37	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/25/19 14:00	03/01/19 19:23	JRG	PE-OP2	1	B039075
2	SM-2320B	02/26/19 07:00	02/26/19 13:50	MEV	MET-1	2	B031742
3	EPA-300.0	02/22/19 23:30	02/23/19 03:11	EMM	IC8	10	B038468
4	SM-2540C	02/26/19 15:00	02/26/19 15:00	CAD	MANUAL	5	B038690
5	EPA-351.2	03/05/19 20:30	03/07/19 08:19	JMH	SC-1	1	B039415
6	EPA-350.1	03/12/19 13:00	03/14/19 08:57	JMH	SC-1	1	B040032
7	EPA-353.2	02/22/19 23:00	02/22/19 23:03	KEB	KONE-1	1	B038558
8	EPA-365.4	03/05/19 20:30	03/06/19 12:34	JMH	SC-1	1	B039416

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500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 10:28  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905805-03		Client Sample Name: J. Troost Dairy, TRO-MW3, 2/22/2019 3:26:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	26	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	40	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	5.1	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	260	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	73	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	30	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	15	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	610	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.18	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	0.080	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.24	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/25/19 14:02	03/01/19 19:26	JRG	PE-OP2	1	B039075
2	SM-2320B	02/26/19 07:00	02/26/19 13:03	MEV	MET-1	1	B031742
3	EPA-300.0	02/22/19 23:30	02/23/19 03:31	EMM	IC8	5	B038468
4	SM-2540C	02/26/19 15:00	02/26/19 15:00	CAD	MANUAL	3.333	B038690
5	EPA-351.2	03/05/19 20:30	03/07/19 08:21	JMH	SC-1	1	B039415
6	EPA-350.1	03/12/19 13:00	03/14/19 08:59	JMH	SC-1	1	B040032
7	EPA-353.2	02/22/19 23:00	02/22/19 23:03	KEB	KONE-1	1	B038558
8	EPA-365.4	03/05/19 20:30	03/06/19 12:34	JMH	SC-1	1	B039416

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 10:28  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031742</b>						
Bicarbonate Alkalinity as CaCO3	B031742-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031742-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031742-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038468</b>						
Chloride	B038468-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B038468-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B038468-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B038558</b>						
Nitrite as N	B038558-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038690</b>						
Total Dissolved Solids @ 180 C	B038690-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B039075</b>						
Dissolved Calcium	B039075-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039075-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039075-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B039075-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039415</b>						
Total Kjeldahl Nitrogen	B039415-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039416</b>						
Total Phosphate	B039416-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040032</b>						
Ammonia as N	B040032-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 10:28  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038468</b>										
Chloride	B038468-BS1	LCS	49.882	50.000	mg/L	99.8		90 - 110		
Nitrate as N	B038468-BS1	LCS	4.9800	5.0000	mg/L	99.6		90 - 110		
Sulfate	B038468-BS1	LCS	98.034	100.00	mg/L	98.0		90 - 110		
<b>QC Batch ID: B038558</b>										
Nitrite as N	B038558-BS1	LCS	0.49331	0.50000	mg/L	98.7		90 - 110		
<b>QC Batch ID: B038690</b>										
Total Dissolved Solids @ 180 C	B038690-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B039075</b>										
Dissolved Calcium	B039075-BS1	LCS	10.546	10.000	mg/L	105		85 - 115		
Dissolved Magnesium	B039075-BS1	LCS	10.310	10.000	mg/L	103		85 - 115		
Dissolved Sodium	B039075-BS1	LCS	9.5243	10.000	mg/L	95.2		85 - 115		
Dissolved Potassium	B039075-BS1	LCS	9.3558	10.000	mg/L	93.6		85 - 115		
<b>QC Batch ID: B039415</b>										
Total Kjeldahl Nitrogen	B039415-BS1	LCS	1.9888	2.0000	mg/L	99.4		90 - 110		
<b>QC Batch ID: B039416</b>										
Total Phosphate	B039416-BS1	LCS	3.0751	3.0660	mg/L	100		85 - 115		
<b>QC Batch ID: B040032</b>										
Ammonia as N	B040032-BS1	LCS	0.98990	1.0000	mg/L	99.0		90 - 110		

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Woodland, CA 95695

Reported: 03/18/2019 10:28
Project: Dairy Rep MP - Expanded Suite
Project Number: J. Troost Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes sections for QC Batch IDs B031742, B038468, B038558, B038690, B039075, and B039415.

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500 First Street  
Woodland, CA 95695

**Reported:** 03/18/2019 10:28  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
<b>QC Batch ID: B039416</b>		Used client sample: Y - Description: TRO-MW1, 02/22/2019 16:00									
Total Phosphate	DUP	1905805-01	5.5185	5.5057		mg/L	0.2		20		
	MS	1905805-01	5.5185	8.4400	3.0660	mg/L		95.3		80 - 120	
	MSD	1905805-01	5.5185	8.4339	3.0660	mg/L	0.1	95.1	20	80 - 120	
<b>QC Batch ID: B040032</b>		Used client sample: N									
Ammonia as N	DUP	1905804-04	0.27860	0.28400		mg/L	1.9		10		
	MS	1905804-04	0.27860	1.2666	1.1111	mg/L		88.9		90 - 110	Q03
	MSD	1905804-04	0.27860	1.2824	1.1111	mg/L	1.2	90.3	10	90 - 110	

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Woodland, CA 95695

**Reported:** 03/18/2019 10:28  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 03/15/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: P&L Souza Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905684

Invoice ID: B333784

Enclosed are the results of analyses for samples received by the laboratory on 2/21/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905684

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.			Chain of Custody		
<b>19-05684</b> 4100 Atlas CL Bakersfield, CA 93308 (661) 327-4911			<b>Analysis Requested</b>		
<b>Report to:</b> Expanded Constituent Suite			From Filtered Sample: Na, K, Mg, Ca, Cl, SO <sub>4</sub> (as SO <sub>4</sub> ), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO <sub>4</sub> ), Alkalinity (HCO <sub>3</sub> , CO <sub>3</sub> & OH) as CaCO <sub>3</sub>	
Name: Luhnoff and Scalmanini Address: 500 First Street City: Woodland State: 95695 CA Attn: Till Angermann			Project: Dairy Representative Monitoring Program Site: P & L Souza Dairy Samplers Name: <i>Morai Del-Tech</i> Global ID - GADAIRY00008		
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qt Fe Unpreserved
-1	<del>PLS-MW1s, PLS-MW7a</del>	2/21/19	15:44	6w	x
-2	<del>PLS-MW2s, PLS-MW2d</del>		15:57		x
-3	<del>PLS-MW3s, PLS-MW3d</del>		16:58		x
-4	<del>PLS-MW4s, PLS-MW4d</del>		16:27		x
-5	<del>PLS-MW5s, PLS-MW5d</del>		16:04		x
-6	<del>PLS-MW6s, PLS-MW6d</del>		14:47		x
-7	<del>PLS-MW7s, PLS-MW7d</del>		15:09		x
8	Field Duplicate				x
9					x
10					x
11					x
12					x

  

From Filtered Sample: Ammonia-N, NO <sub>3</sub> -N, NO <sub>2</sub> -N	From Filtered Sample: Na, K, Mg, Ca, Cl, SO <sub>4</sub> (as SO <sub>4</sub> ), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO <sub>4</sub> ), Alkalinity (HCO <sub>3</sub> , CO <sub>3</sub> & OH) as CaCO <sub>3</sub>
---	---	---

  

Relinquished by: (Signature) <i>[Signature]</i> 2/21/19 17:30	Received By: <i>[Signature]</i> 2-21-19 17:30
Relinquished by: (Signature) <i>[Signature]</i> 2:00	Received by: <i>[Signature]</i> 2-21-19 22:00
Relinquished by: (Signature)	Received By: <i>[Signature]</i> 2-21-19 22:00

  

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhnoff and Scalmanini Consulting Engineers via email: llavagnine@lsce.com, rbyson@lsce.com, pdhalliwell@lsce.com, jlovelis@lsce.com  
 4) Send invoices to: Joannette Lovell (jlovelis@lsce.com).

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Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-05684

**SHIPPING INFORMATION**  
Fed Ex  UPS  Ontrac  Hand Delivery   
BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
Ice Chest  None  Box   
Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
YES  NO   
W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals Ice Chest  Containers  None  Comments:  
Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

**COC Received**  
YES  NO

Emissivity: 0.98 Container: PE Thermometer ID: 208  
Temperature: (A) 2.3 °C / (C) 2.6 °C Date/Time 2/21 2200  
Analyst Init EAC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: EAC Date/Time: 2/21-19 2214 Rev 21 05/23/2016  
A = Actual / C = Corrected

IS:\WPDocs\Work\PerfectLAB\_Software\MSAMREC\rev 20\

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/15/2019 15:20  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905684-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	P&L Souza Dairy	<b>Sampling Date:</b>	02/21/2019 15:44
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905684-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	P&L Souza Dairy	<b>Sampling Date:</b>	02/21/2019 15:27
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905684-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	P&L Souza Dairy	<b>Sampling Date:</b>	02/21/2019 16:52
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905684-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	P&L Souza Dairy	<b>Sampling Date:</b>	02/21/2019 16:27
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905684-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	P&L Souza Dairy	<b>Sampling Date:</b>	02/21/2019 16:04
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 03/15/2019 15:20  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905684-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	P&L Souza Dairy	<b>Sampling Date:</b>	02/21/2019 14:47
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905684-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	P&L Souza Dairy	<b>Sampling Date:</b>	02/21/2019 15:09
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

Reported: 03/15/2019 15:20  
Project: Dairy Rep MP - Expanded Suite  
Project Number: P&L Souza Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905684-01	Client Sample Name:	P&L Souza Dairy, PLS-MW1s, 2/21/2019 3:44:00PM, Antonio Morales					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	190	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	74	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	190	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.8	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	410	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	210	mg/L	5.0	0.67	EPA-300.0	ND	A07	3
Nitrate as N	82	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	130	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.7	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.14	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.087	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.37	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:16	02/27/19 20:16	JRG	PE-OP2	1	B038591
2	SM-2320B	02/25/19 12:00	02/25/19 16:39	MEV	MET-1	2	B031737
3	EPA-300.0	02/22/19 08:00	02/22/19 15:24	EMM	IC8	10	B038368
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	10	B038513
5	EPA-351.2	03/04/19 18:30	03/07/19 17:50	JMH	SC-1	1	B039287
6	EPA-350.1	03/11/19 12:30	03/12/19 10:47	JMH	SC-1	1	B039889
7	EPA-353.2	02/22/19 08:37	02/22/19 09:24	MC1	KONE-1	1	B038555
8	EPA-365.4	03/04/19 18:30	03/07/19 12:32	JMH	SC-1	1	B039288

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Woodland, CA 95695

**Reported:** 03/15/2019 15:20  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905684-02		Client Sample Name: P&L Souza Dairy, PLS-MW2s, 2/21/2019 3:27:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	0.017		1
Dissolved Magnesium	56	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	150	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.4	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	500	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	44	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	66	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.7	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.17	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.15	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.20	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:16	02/27/19 20:19	JRG	PE-OP2	1	B038591
2	SM-2320B	02/25/19 12:00	02/25/19 16:44	MEV	MET-1	2	B031737
3	EPA-300.0	02/22/19 08:00	02/22/19 16:46	EMM	IC8	5	B038368
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	5	B038513
5	EPA-351.2	03/04/19 18:30	03/07/19 17:51	JMH	SC-1	1	B039287
6	EPA-350.1	03/11/19 12:30	03/12/19 10:50	JMH	SC-1	1	B039889
7	EPA-353.2	02/22/19 08:37	02/22/19 09:27	MC1	KONE-1	1	B038555
8	EPA-365.4	03/04/19 18:30	03/07/19 12:33	JMH	SC-1	1	B039288

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Woodland, CA 95695

Reported: 03/15/2019 15:20  
Project: Dairy Rep MP - Expanded Suite  
Project Number: P&L Souza Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905684-03	Client Sample Name:	P&L Souza Dairy, PLS-MW3s, 2/21/2019 4:52:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	180	mg/L	0.10	0.016	EPA-200.7	ND		1	
Dissolved Magnesium	52	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	170	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	2.6	mg/L	1.0	0.10	EPA-200.7	ND		1	
Bicarbonate Alkalinity as CaCO3	560	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	140	mg/L	2.5	0.34	EPA-300.0	ND	A07	3	
Nitrate as N	50	mg/L	0.50	0.095	EPA-300.0	ND	A07	3	
Sulfate	120	mg/L	5.0	0.70	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		4	
Total Kjeldahl Nitrogen	1.8	mg/L	0.20	0.036	EPA-351.2	ND		5	
Ammonia as N	0.17	mg/L	0.20	0.050	EPA-350.1	ND	J	6	
Nitrite as N	0.11	mg/L	0.050	0.010	EPA-353.2	ND		7	
Total Phosphate	0.35	mg/L	0.15	0.050	EPA-365.4	ND		8	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:20	02/28/19 17:27	JRG	PE-OP2	1	B038592
2	SM-2320B	02/25/19 12:00	02/25/19 16:50	MEV	MET-1	2	B031737
3	EPA-300.0	02/22/19 08:00	02/22/19 17:47	KEB	IC8	5	B038368
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	5	B038513
5	EPA-351.2	03/04/19 18:30	03/07/19 17:52	JMH	SC-1	1	B039287
6	EPA-350.1	03/11/19 12:30	03/12/19 10:51	JMH	SC-1	1	B039889
7	EPA-353.2	02/22/19 08:37	02/22/19 09:27	MC1	KONE-1	1	B038555
8	EPA-365.4	03/04/19 18:30	03/07/19 12:34	JMH	SC-1	1	B039288

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**Reported:** 03/15/2019 15:20  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905684-04		Client Sample Name: P&L Souza Dairy, PLS-MW4s, 2/21/2019 4:27:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	220	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	95	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	290	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	530	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	1100	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	680	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	27	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	200	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2300	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	2.9	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.42	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.084	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.47	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:22	02/28/19 18:47	JRG	PE-OP2	1	B038593
2	SM-2320B	02/25/19 12:00	02/25/19 16:57	MEV	MET-1	2	B031737
3	EPA-300.0	02/22/19 08:00	02/22/19 18:08	KEB	IC8	5	B038368
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	20	B038513
5	EPA-351.2	03/04/19 18:30	03/07/19 17:53	JMH	SC-1	1	B039287
6	EPA-350.1	03/13/19 10:30	03/14/19 08:17	JMH	SC-1	1	B040030
7	EPA-353.2	02/22/19 08:37	02/22/19 09:27	MC1	KONE-1	1	B038555
8	EPA-365.4	03/04/19 18:30	03/07/19 12:34	JMH	SC-1	1	B039288

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**Reported:** 03/15/2019 15:20  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905684-05		Client Sample Name: P&L Souza Dairy, PLS-MW5s, 2/21/2019 4:04:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	160	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	49	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	16	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	380	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	140	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	72	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	64	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.2	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.18	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.15	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.3	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:22	02/28/19 18:50	JRG	PE-OP2	1	B038593
2	SM-2320B	02/25/19 12:00	02/25/19 17:03	MEV	MET-1	2	B031737
3	EPA-300.0	02/22/19 08:00	02/22/19 18:28	KEB	IC8	5	B038368
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	5	B038513
5	EPA-351.2	03/04/19 18:30	03/08/19 07:46	JMH	SC-1	1	B039287
6	EPA-350.1	03/13/19 10:30	03/14/19 08:21	JMH	SC-1	1	B040030
7	EPA-353.2	02/22/19 08:37	02/22/19 09:28	MC1	KONE-1	1	B038555
8	EPA-365.4	03/04/19 18:30	03/07/19 12:35	JMH	SC-1	1	B039288

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**Reported:** 03/15/2019 15:20  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905684-06		Client Sample Name: P&L Souza Dairy, PLS-MW6s, 2/21/2019 2:47:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	61	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	260	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	5.1	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	660	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	210	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	34	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	210	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1300	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.9	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.15	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.32	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.37	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:22	02/28/19 20:15	JRG	PE-OP2	1	B038594
2	SM-2320B	02/25/19 12:00	02/25/19 17:09	MEV	MET-1	2	B031737
3	EPA-300.0	02/22/19 08:00	02/22/19 22:35	KEB	IC8	2	B038368
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	10	B038513
5	EPA-351.2	03/04/19 18:30	03/08/19 07:48	JMH	SC-1	1	B039287
6	EPA-350.1	03/13/19 10:30	03/14/19 08:23	JMH	SC-1	1	B040030
7	EPA-353.2	02/22/19 08:37	02/22/19 09:28	MC1	KONE-1	1	B038555
8	EPA-365.4	03/04/19 18:30	03/07/19 12:36	JMH	SC-1	1	B039288

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**Reported:** 03/15/2019 15:20  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905684-07		Client Sample Name: P&L Souza Dairy, PLS-MW7s, 2/21/2019 3:09:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	200	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	76	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	170	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	4.0	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	460	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	220	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	86	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	170	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	2.2	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.25	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.27	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.2	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:25	02/28/19 20:18	JRG	PE-OP2	1	B038594
2	SM-2320B	02/25/19 12:00	02/25/19 17:15	MEV	MET-1	2	B031737
3	EPA-300.0	02/22/19 08:00	02/22/19 22:55	KEB	IC8	5	B038368
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	10	B038513
5	EPA-351.2	03/04/19 18:30	03/08/19 07:48	JMH	SC-1	1	B039287
6	EPA-350.1	03/13/19 10:30	03/14/19 08:25	JMH	SC-1	1	B040030
7	EPA-353.2	02/22/19 10:00	02/22/19 10:00	MC1	KONE-1	1	B038556
8	EPA-365.4	03/04/19 18:30	03/07/19 12:37	JMH	SC-1	1	B039288

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**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031737</b>						
Bicarbonate Alkalinity as CaCO3	B031737-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031737-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031737-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038368</b>						
Chloride	B038368-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038368-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038368-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038513</b>						
Total Dissolved Solids @ 180 C	B038513-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038555</b>						
Nitrite as N	B038555-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038556</b>						
Nitrite as N	B038556-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038591</b>						
Dissolved Calcium	B038591-BLK1	0.017342	mg/L	0.10	0.016	J
Dissolved Magnesium	B038591-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038591-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038591-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B038592</b>						
Dissolved Calcium	B038592-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038592-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038592-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038592-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B038593</b>						
Dissolved Calcium	B038593-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038593-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038593-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038593-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B038594</b>						
Dissolved Calcium	B038594-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038594-BLK1	ND	mg/L	0.050	0.019	

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**Reported:** 03/15/2019 15:20  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B038594</b>						
Dissolved Sodium	B038594-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038594-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039287</b>						
Total Kjeldahl Nitrogen	B039287-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039288</b>						
Total Phosphate	B039288-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039889</b>						
Ammonia as N	B039889-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B040030</b>						
Ammonia as N	B040030-BLK1	ND	mg/L	0.20	0.050	

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**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	Control Limits		Lab Quals
							RPD	Percent Recovery	
<b>QC Batch ID: B038368</b>									
Chloride	B038368-BS1	LCS	52.708	50.000	mg/L	105		90 - 110	
Nitrate as N	B038368-BS1	LCS	5.2020	5.0000	mg/L	104		90 - 110	
Sulfate	B038368-BS1	LCS	103.36	100.00	mg/L	103		90 - 110	
<b>QC Batch ID: B038513</b>									
Total Dissolved Solids @ 180 C	B038513-BS1	LCS	595.00	586.00	mg/L	102		90 - 110	
<b>QC Batch ID: B038555</b>									
Nitrite as N	B038555-BS1	LCS	0.49607	0.50000	mg/L	99.2		90 - 110	
<b>QC Batch ID: B038556</b>									
Nitrite as N	B038556-BS1	LCS	0.50016	0.50000	mg/L	100		90 - 110	
<b>QC Batch ID: B038591</b>									
Dissolved Calcium	B038591-BS1	LCS	10.550	10.000	mg/L	106		85 - 115	
Dissolved Magnesium	B038591-BS1	LCS	10.450	10.000	mg/L	104		85 - 115	
Dissolved Sodium	B038591-BS1	LCS	9.7379	10.000	mg/L	97.4		85 - 115	
Dissolved Potassium	B038591-BS1	LCS	8.9152	10.000	mg/L	89.2		85 - 115	
<b>QC Batch ID: B038592</b>									
Dissolved Calcium	B038592-BS1	LCS	9.7714	10.000	mg/L	97.7		85 - 115	
Dissolved Magnesium	B038592-BS1	LCS	9.3331	10.000	mg/L	93.3		85 - 115	
Dissolved Sodium	B038592-BS1	LCS	8.8367	10.000	mg/L	88.4		85 - 115	
Dissolved Potassium	B038592-BS1	LCS	9.1714	10.000	mg/L	91.7		85 - 115	
<b>QC Batch ID: B038593</b>									
Dissolved Calcium	B038593-BS1	LCS	9.9115	10.000	mg/L	99.1		85 - 115	
Dissolved Magnesium	B038593-BS1	LCS	9.7287	10.000	mg/L	97.3		85 - 115	
Dissolved Sodium	B038593-BS1	LCS	9.0538	10.000	mg/L	90.5		85 - 115	
Dissolved Potassium	B038593-BS1	LCS	9.4741	10.000	mg/L	94.7		85 - 115	
<b>QC Batch ID: B038594</b>									
Dissolved Calcium	B038594-BS1	LCS	9.8595	10.000	mg/L	98.6		85 - 115	
Dissolved Magnesium	B038594-BS1	LCS	9.7287	10.000	mg/L	97.3		85 - 115	
Dissolved Sodium	B038594-BS1	LCS	9.0322	10.000	mg/L	90.3		85 - 115	
Dissolved Potassium	B038594-BS1	LCS	9.6021	10.000	mg/L	96.0		85 - 115	
<b>QC Batch ID: B039287</b>									
Total Kjeldahl Nitrogen	B039287-BS1	LCS	2.0538	2.0000	mg/L	103		90 - 110	
<b>QC Batch ID: B039288</b>									

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/15/2019 15:20  
Project: Dairy Rep MP - Expanded Suite  
Project Number: P&L Souza Dairy  
Project Manager: Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B039288</b>										
Total Phosphate	B039288-BS1	LCS	3.1150	3.0660	mg/L	102		85 - 115		
<b>QC Batch ID: B039889</b>										
Ammonia as N	B039889-BS1	LCS	0.93880	1.0000	mg/L	93.9		90 - 110		
<b>QC Batch ID: B040030</b>										
Ammonia as N	B040030-BS1	LCS	0.99260	1.0000	mg/L	99.3		90 - 110		

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Woodland, CA 95695

Reported: 03/15/2019 15:20
Project: Dairy Rep MP - Expanded Suite
Project Number: P&L Souza Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC Batch IDs B031737, B038368, B038513, B038555, B038556, and B038591.

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500 First Street  
Woodland, CA 95695

Reported: 03/15/2019 15:20  
Project: Dairy Rep MP - Expanded Suite  
Project Number: P&L Souza Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab	
								Percent Recovery	RPD		Percent Recovery
<b>QC Batch ID: B038592</b>		Used client sample: N									
Dissolved Calcium	DUP	1905550-01	91.946	92.244		mg/L	0.3		20		
	MS	1905550-01	91.946	103.07	10.204	mg/L		109		85 - 115	
	MSD	1905550-01	91.946	103.37	10.204	mg/L	0.3	112	20	85 - 115	
Dissolved Magnesium	DUP	1905550-01	24.995	25.086		mg/L	0.4		20		
	MS	1905550-01	24.995	34.844	10.204	mg/L		96.5		85 - 115	
	MSD	1905550-01	24.995	35.197	10.204	mg/L	1.0	100	20	85 - 115	
Dissolved Sodium	DUP	1905550-01	58.104	58.169		mg/L	0.1		20		
	MS	1905550-01	58.104	69.564	10.204	mg/L		112		85 - 115	
	MSD	1905550-01	58.104	69.310	10.204	mg/L	0.4	110	20	85 - 115	
Dissolved Potassium	DUP	1905550-01	3.0792	3.0358		mg/L	1.4		20		
	MS	1905550-01	3.0792	12.912	10.204	mg/L		96.4		85 - 115	
	MSD	1905550-01	3.0792	13.122	10.204	mg/L	1.6	98.4	20	85 - 115	
<b>QC Batch ID: B038593</b>		Used client sample: N									
Dissolved Calcium	DUP	1905700-01	40.703	39.471		mg/L	3.1		20		
	MS	1905700-01	40.703	87.605	51.020	mg/L		91.9		85 - 115	
	MSD	1905700-01	40.703	88.227	51.020	mg/L	0.7	93.1	20	85 - 115	
Dissolved Magnesium	DUP	1905700-01	39.768	39.326		mg/L	1.1		20		
	MS	1905700-01	39.768	85.525	51.020	mg/L		89.7		85 - 115	
	MSD	1905700-01	39.768	86.756	51.020	mg/L	1.4	92.1	20	85 - 115	
<b>Dissolved Sodium</b>	DUP	<b>1905700-01</b>	<b>2725.5</b>	<b>2645.9</b>		<b>mg/L</b>	<b>3.0</b>		<b>20</b>		
	MS	<b>1905700-01</b>	<b>2725.5</b>	<b>2700.2</b>	<b>51.020</b>	<b>mg/L</b>		<b>-49.6</b>		<b>85 - 115</b>	<b>A03</b>
	MSD	<b>1905700-01</b>	<b>2725.5</b>	<b>2785.4</b>	<b>51.020</b>	<b>mg/L</b>	<b>3.1</b>	<b>117</b>	<b>20</b>	<b>85 - 115</b>	<b>A03</b>
Dissolved Potassium	DUP	1905700-01	12.973	12.479		mg/L	3.9		20		
	MS	1905700-01	12.973	69.496	51.020	mg/L		111		85 - 115	
	MSD	1905700-01	12.973	68.772	51.020	mg/L	1.0	109	20	85 - 115	
<b>QC Batch ID: B038594</b>		Used client sample: N									
Dissolved Calcium	DUP	1905683-01	119.17	119.85		mg/L	0.6		20		
	MS	1905683-01	119.17	128.85	10.204	mg/L		94.9		85 - 115	
	MSD	1905683-01	119.17	128.19	10.204	mg/L	0.5	88.4	20	85 - 115	
Dissolved Magnesium	DUP	1905683-01	36.630	36.960		mg/L	0.9		20		
	MS	1905683-01	36.630	46.210	10.204	mg/L		93.9		85 - 115	
	MSD	1905683-01	36.630	45.986	10.204	mg/L	0.5	91.7	20	85 - 115	
Dissolved Sodium	DUP	1905683-01	49.228	49.749		mg/L	1.1		20		
	MS	1905683-01	49.228	59.382	10.204	mg/L		99.5		85 - 115	
	MSD	1905683-01	49.228	58.694	10.204	mg/L	1.2	92.8	20	85 - 115	
Dissolved Potassium	DUP	1905683-01	20.867	20.715		mg/L	0.7		20		
	MS	1905683-01	20.867	31.649	10.204	mg/L		106		85 - 115	
	MSD	1905683-01	20.867	31.645	10.204	mg/L	0.0	106	20	85 - 115	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/15/2019 15:20  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B039287</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1905688-02	6.1460	5.4540		mg/L	11.9		20	
	MS	1905688-02	6.1460	7.5475	2.0000	mg/L		70.1		Q03
	MSD	1905688-02	6.1460	7.6975	2.0000	mg/L	2.0	77.6	20	90 - 110 Q03
<b>QC Batch ID: B039288</b>		Used client sample: N								
Total Phosphate	DUP	1905688-02	4.4006	4.5775		mg/L	3.9		20	
	MS	1905688-02	4.4006	7.4628	3.0660	mg/L		99.9		80 - 120
	MSD	1905688-02	4.4006	7.4119	3.0660	mg/L	0.7	98.2	20	80 - 120
<b>QC Batch ID: B039889</b>		Used client sample: N								
Ammonia as N	DUP	1905683-05	0.075800	0.085200		mg/L	11.7		10	J,A02
	MS	1905683-05	0.075800	1.1508	1.1111	mg/L		96.7		90 - 110
	MSD	1905683-05	0.075800	1.1621	1.1111	mg/L	1.0	97.8	10	90 - 110
<b>QC Batch ID: B040030</b>		Used client sample: Y - Description: PLS-MW4s, 02/21/2019 16:27								
Ammonia as N	DUP	1905684-04	0.42320	0.39350		mg/L	7.3		10	
	MS	1905684-04	0.42320	1.5489	1.1111	mg/L		101		90 - 110
	MSD	1905684-04	0.42320	1.5260	1.1111	mg/L	1.5	99.3	10	90 - 110

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Woodland, CA 95695

**Reported:** 03/15/2019 15:20  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** P&L Souza Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 03/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Paul Caetano Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1905550  
Invoice ID: B333325

Enclosed are the results of analyses for samples received by the laboratory on 2/20/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905550

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



19-05550

BC Laboratories, Inc.		Chain of Custody	
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911			
<b>Report to:</b>			
Expanded Constituent Suite			
Project: Dairy Representative Monitoring Program			
Site: Paul Caetano Dairy			
Samplers Name: Antonio Del-Tech			
Global ID - GADAIR700009			
<b>Analysis Requested</b>			
From Filtered Sample:		From Filtered Sample:	
Ammonia-N, NO3-N, NO2-N		Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	
From Unfiltered Sample:		From Unfiltered Sample:	
Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3			
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled
1	GAE-MW1s, CAE-MW1d	2/20/19	
2	CAE-MW2s, CAE-MW2d		
3	GAE-MW3s, GAE-MW3d		
4	GAE-MW4s, CAE-MW4d		
5	CAE-MW5s, CAE-MW5d -1	1647	
6	CAE-MW6s, CAE-MW6d -2	1627	
7	-3 Field Duplicate #2		
8			
9			
10			
11			
12			
Matrix		Matrix	
Gw		Gw	
SHOUL HOLDING TIME			
Cr <sup>6</sup> (NO <sub>2</sub> ) (NO <sub>3</sub> ) OP SS			
DO Cl <sub>2</sub> BOD MBAS COT			
CHK BY		Gw	
DISTRIBUTION		Gw	
SUB-OUT			
Received by:		Date & Time	
Antonio Del-Tech		2/20/19 17:20	
Received by:		Date & Time	
Gw		2/20/19 12:30	
Relinquished by: (Signature)		Date & Time	
Antonio Del-Tech		2/20/19 17:20	
Relinquished by: (Signature)		Date & Time	
Antonio Del-Tech		2/20/19 12:30	
Relinquished by: (Signature)		Date & Time	
Antonio Del-Tech		2/20/19 12:30	
<b>Comments:</b>			
1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.			
2) Lab reports shall identify sampled wells exactly as shown on this CoC.			
3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: jlvelvet@isce.com, rbyson@isce.com, pdhalwai@isce.com.			
4) Send invoices to Jeanette Lovelis (jlovelis@isce.com).			
(A)= Analysis		(C)= Container (P)= Preservative	

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BC LABORATORIES INC. COOLER RECEIPT FORM Page      Of     

Submission #: 19-05550

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery  Other  (Specify) \_\_\_\_\_  
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.98 Container: VE Thermometer ID: 208 Date/Time 2/20 2230  
 Temperature: (A) 0.7 °C / (C) 1.0 °C Analyst Init EMC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 503/608/7080										
QT EPA 515.1/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: EMC Date/Time: 2-20-19  
 A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:23  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905550-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	02/20/2019 16:47
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time				
1905550-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	02/20/2019 16:27
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time				
1905550-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	02/20/2019 00:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate #2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time				

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Woodland, CA 95695

**Reported:** 03/12/2019 13:23  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905550-01	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW5s, 2/20/2019 4:47:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	92	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	25	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	58	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.1	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	240	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	12	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	50	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	27	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	670	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.76	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.091	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.72	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:17	02/28/19 16:48	JRG	PE-OP2	1	B038592
2	SM-2320B	02/22/19 12:00	02/22/19 14:19	MEV	MET-1	1	B031728
3	EPA-300.0	02/21/19 13:00	02/21/19 18:31	KEB	IC2	5	B038229
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	3.333	B038361
5	EPA-351.2	03/03/19 10:00	03/11/19 08:26	JMH	SC-1	1	B039138
6	EPA-350.1	03/07/19 12:52	03/08/19 11:35	JMH	SC-1	1	B039574
7	EPA-353.2	02/21/19 11:29	02/21/19 11:29	MC1	KONE-1	1	B038508
8	EPA-365.4	03/03/19 10:00	03/11/19 10:53	JMH	SC-1	1	B039139

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:23  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905550-02	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW6s, 2/20/2019 4:27:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	160	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	94	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	27	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	500	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	86	mg/L	5.0	0.67	EPA-300.0	ND	A07	3
Nitrate as N	120	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	120	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	ND	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.14	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.53	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 19:20	02/28/19 17:01	JRG	PE-OP2	1	B038592
2	SM-2320B	02/22/19 12:00	02/22/19 15:11	MEV	MET-1	2	B031728
3	EPA-300.0	02/21/19 13:00	02/21/19 18:52	KEB	IC2	10	B038229
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	10	B038361
5	EPA-351.2	03/03/19 10:00	03/11/19 08:51	JMH	SC-1	1	B039138
6	EPA-350.1	03/07/19 12:52	03/08/19 11:39	JMH	SC-1	1	B039574
7	EPA-353.2	02/21/19 11:29	02/21/19 11:29	MC1	KONE-1	1	B038508
8	EPA-365.4	03/03/19 10:00	03/11/19 10:54	JMH	SC-1	1	B039139

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Woodland, CA 95695

**Reported:** 03/12/2019 13:23  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905550-03		<b>Client Sample Name:</b> Paul Caetano Dairy, Field Duplicate #2, 2/20/2019 12:00:00AM, Antonio Morales						
<b>Constituent</b>	<b>Result</b>	<b>Units</b>	<b>PQL</b>	<b>MDL</b>	<b>Method</b>	<b>MB Bias</b>	<b>Lab Quals</b>	<b>Run #</b>
Dissolved Calcium	170	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	97	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	140	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	27	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	500	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	89	mg/L	5.0	0.67	EPA-300.0	ND	A07	3
Nitrate as N	120	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	120	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.6	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.14	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.53	mg/L	0.15	0.050	EPA-365.4	ND		8

<b>Run #</b>	<b>Method</b>	<b>Prep Date</b>	<b>Run Date/Time</b>	<b>Analyst</b>	<b>Instrument</b>	<b>Dilution</b>	<b>QC Batch ID</b>
1	EPA-200.7	02/21/19 19:20	02/28/19 17:03	JRG	PE-OP2	1	B038592
2	SM-2320B	02/22/19 12:00	02/22/19 15:17	MEV	MET-1	2	B031728
3	EPA-300.0	02/21/19 13:00	02/21/19 19:13	EMM	IC2	10	B038229
4	SM-2540C	02/22/19 14:00	02/22/19 14:00	CAD	MANUAL	10	B038361
5	EPA-351.2	03/03/19 10:00	03/11/19 08:28	JMH	SC-1	1	B039138
6	EPA-350.1	03/07/19 12:52	03/08/19 11:40	JMH	SC-1	1	B039574
7	EPA-353.2	02/21/19 11:29	02/21/19 11:29	MC1	KONE-1	1	B038508
8	EPA-365.4	03/03/19 10:00	03/11/19 10:54	JMH	SC-1	1	B039139

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500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:23  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031728</b>						
Bicarbonate Alkalinity as CaCO3	B031728-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031728-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031728-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038229</b>						
Chloride	B038229-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038229-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038229-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038361</b>						
Total Dissolved Solids @ 180 C	B038361-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038508</b>						
Nitrite as N	B038508-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038592</b>						
Dissolved Calcium	B038592-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038592-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038592-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038592-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039138</b>						
Total Kjeldahl Nitrogen	B039138-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039139</b>						
Total Phosphate	B039139-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039574</b>						
Ammonia as N	B039574-BLK1	ND	mg/L	0.20	0.050	

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Woodland, CA 95695

**Reported:** 03/12/2019 13:23  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038229</b>										
Chloride	B038229-BS1	LCS	53.315	50.000	mg/L	107		90 - 110		
Nitrate as N	B038229-BS1	LCS	5.1860	5.0000	mg/L	104		90 - 110		
Sulfate	B038229-BS1	LCS	105.10	100.00	mg/L	105		90 - 110		
<b>QC Batch ID: B038361</b>										
Total Dissolved Solids @ 180 C	B038361-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B038508</b>										
Nitrite as N	B038508-BS1	LCS	0.50553	0.50000	mg/L	101		90 - 110		
<b>QC Batch ID: B038592</b>										
Dissolved Calcium	B038592-BS1	LCS	9.7714	10.000	mg/L	97.7		85 - 115		
Dissolved Magnesium	B038592-BS1	LCS	9.3331	10.000	mg/L	93.3		85 - 115		
Dissolved Sodium	B038592-BS1	LCS	8.8367	10.000	mg/L	88.4		85 - 115		
Dissolved Potassium	B038592-BS1	LCS	9.1714	10.000	mg/L	91.7		85 - 115		
<b>QC Batch ID: B039138</b>										
Total Kjeldahl Nitrogen	B039138-BS1	LCS	2.0136	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B039139</b>										
Total Phosphate	B039139-BS1	LCS	3.1202	3.0660	mg/L	102		85 - 115		
<b>QC Batch ID: B039574</b>										
Ammonia as N	B039574-BS1	LCS	1.0051	1.0000	mg/L	101		90 - 110		

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Woodland, CA 95695

Reported: 03/12/2019 13:23  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Paul Caetano Dairy  
Project Manager: Till Angermann

## Water Analysis (General Chemistry) Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
								Percent Recovery	RPD	Percent Recovery
<b>QC Batch ID: B031728</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1905550-01	238.85	239.46		mg/L	0.3		10	
Carbonate Alkalinity as CaCO3	DUP	1905550-01	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1905550-01	ND	ND		mg/L			10	
<b>QC Batch ID: B038229</b>		Used client sample: N								
Chloride	DUP	1905554-01	32.790	32.590		mg/L	0.6		10	
	MS	1905554-01	32.790	314.98	252.53	mg/L		112		80 - 120
	MSD	1905554-01	32.790	314.73	252.53	mg/L	0.1	112	10	80 - 120
Nitrate as N	DUP	1905554-01	41.850	42.015		mg/L	0.4		10	
	MS	1905554-01	41.850	68.995	25.253	mg/L		107		80 - 120
	MSD	1905554-01	41.850	69.338	25.253	mg/L	0.5	109	10	80 - 120
Sulfate	DUP	1905554-01	90.940	89.485		mg/L	1.6		10	
	MS	1905554-01	90.940	648.27	505.05	mg/L		110		80 - 120
	MSD	1905554-01	90.940	649.13	505.05	mg/L	0.1	111	10	80 - 120
<b>QC Batch ID: B038361</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1905550-02	1550.0	1570.0		mg/L	1.3		10	
<b>QC Batch ID: B038508</b>		Used client sample: Y - Description: CAE-MW5s, 02/20/2019 16:47								
Nitrite as N	DUP	1905550-01	ND	ND		mg/L			10	
	MS	1905550-01	ND	0.57758	0.52632	mg/L		110		90 - 110
	MSD	1905550-01	ND	0.56520	0.52632	mg/L	2.2	107	10	90 - 110
<b>QC Batch ID: B038592</b>		Used client sample: Y - Description: CAE-MW5s, 02/20/2019 16:47								
Dissolved Calcium	DUP	1905550-01	91.946	92.244		mg/L	0.3		20	
	MS	1905550-01	91.946	103.07	10.204	mg/L		109		85 - 115
	MSD	1905550-01	91.946	103.37	10.204	mg/L	0.3	112	20	85 - 115
Dissolved Magnesium	DUP	1905550-01	24.995	25.086		mg/L	0.4		20	
	MS	1905550-01	24.995	34.844	10.204	mg/L		96.5		85 - 115
	MSD	1905550-01	24.995	35.197	10.204	mg/L	1.0	100	20	85 - 115
Dissolved Sodium	DUP	1905550-01	58.104	58.169		mg/L	0.1		20	
	MS	1905550-01	58.104	69.564	10.204	mg/L		112		85 - 115
	MSD	1905550-01	58.104	69.310	10.204	mg/L	0.4	110	20	85 - 115
Dissolved Potassium	DUP	1905550-01	3.0792	3.0358		mg/L	1.4		20	
	MS	1905550-01	3.0792	12.912	10.204	mg/L		96.4		85 - 115
	MSD	1905550-01	3.0792	13.122	10.204	mg/L	1.6	98.4	20	85 - 115
<b>QC Batch ID: B039138</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1905552-01	0.41640	0.39260		mg/L	5.9		20	
	MS	1905552-01	0.41640	1.6717	2.0000	mg/L		62.8		90 - 110
	MSD	1905552-01	0.41640	1.3754	2.0000	mg/L	19.4	48.0	20	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:23  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
<b>QC Batch ID: B039139</b>		Used client sample: N									
Total Phosphate	DUP	1905552-01	0.94286	0.96831		mg/L	2.7		20		
	MS	1905552-01	0.94286	4.0685	3.0660	mg/L		102		80 - 120	
	MSD	1905552-01	0.94286	4.0796	3.0660	mg/L	0.3	102	20	80 - 120	
<b>QC Batch ID: B039574</b>		Used client sample: Y - Description: CAE-MW5s, 02/20/2019 16:47									
Ammonia as N	DUP	1905550-01	0.090600	0.069400		mg/L	26.5		10		J,A02
	MS	1905550-01	0.090600	1.1943	1.1111	mg/L		99.3		90 - 110	
	MSD	1905550-01	0.090600	1.2826	1.1111	mg/L	7.1	107	10	90 - 110	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/12/2019 13:23  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 03/13/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Paul Caetano Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1905682  
Invoice ID: B333492

Enclosed are the results of analyses for samples received by the laboratory on 2/21/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905682

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.

BC Laboratories, Inc.		4100 Atlas CL Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to:				Analysis Requested	
Name: Luthdorff and Scalmanni				From Filtered Sample:	
Address: 500 First Street				Na, K, Mg, Ca, Cl, SO <sub>4</sub> (as SO <sub>4</sub> ), Total Dissolved Solids	
City: Woodland				From Unfiltered Sample:	
State: 95696				Total Kjeldahl Nitrogen, Total Phosphate (as PO <sub>4</sub> ), Alkalinity (HCO <sub>3</sub> , CO <sub>3</sub> & OH) as CaCO <sub>3</sub>	
Atrn: Till Angermann					
Expanded Constituent Suite					
Project: Dairy Representative Monitoring Program					
Site: Paul Caetano Dairy / 1/21/19					
Samplers Name: Antonio Del-Tech					
Global ID - GADAIRY00008					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl, Pe Unpreserved
- 1	CAE-MW4s, CAE-MW1d	2/21/19	917	GW	x
- 2	CAE-MW2s, CAE-MW2d		957		x
- 3	CAE-MW3s, CAE-MW3d		937		x
- 4	CAE-MW4s, CAE-MW4d		356		x
5	CAE-MW5s, CAE-MW5d				x
6	CAE-MW6s, CAE-MW6d				x
7	Field-Duplicate				x
8					
9					
10					
11					
12					
STORAGE FOLLOWING TIME <input type="checkbox"/> G-1 <input type="checkbox"/> NO <input type="checkbox"/> NC <input type="checkbox"/> OF <input type="checkbox"/> SS <input type="checkbox"/> DO <input type="checkbox"/> O <sub>2</sub> <input type="checkbox"/> BOD <input type="checkbox"/> MBAS <input type="checkbox"/> COT				CHK BY: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> DISTRIBUTION SUB-OUT <input type="checkbox"/>	
Relinquished by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature)				Received By: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Date & Time: 2/21/19 17:30 Date & Time: 2-21-19 2200 Date & Time:	
Comments: 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luthdorff and Scalmanni Consulting Engineers via email: luvagnino@lscce.com, rryson@lscce.com, pdhalval@lscce.com. 4) Send invoices to Jeannette Lovelis (jlovelis@lscce.com).					
(A)= Analysis (C)= Container (P)= Preservative					

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BC LABORATORIES INC.		COOLER RECEIPT FORM		Page <u>1</u> Of <u>1</u>
Submission #: <u>19-05682</u>				
SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments: _____				
Custody Seals Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments: _____				
Intact? Yes <input type="checkbox"/> No <input type="checkbox"/> Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>				
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.98</u> Container: <u>PE</u> Thermometer ID: <u>208</u> Temperature: (A) <u>2.3</u> °C / (C) <u>2.6</u> °C		Date/Time <u>2/21 2200</u> Analyst Init <u>ENR</u>

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz IAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: ENR Date/Time: 2-21-19 2214 Rev 21 05/23/2016  
 A = Actual / C = Corrected

(S:\WFD\cl\l\ord\Perfecr\LAB\_S0CS\FORMS\SAMRECrev 20)



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/13/2019 12:41  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905682-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	02/21/2019 09:17
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW1d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905682-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	02/21/2019 09:57
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905682-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	02/21/2019 09:37
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1905682-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/21/2019 22:00
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	02/21/2019 08:56
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW4d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Reported: 03/13/2019 12:41  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Paul Caetano Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905682-01	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW1d, 2/21/2019 9:17:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	68	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	160	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	290	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	1200	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	150	mg/L	1.0	0.15	EPA-300.0	0.62	A07	3
Nitrate as N	9.8	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	200	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	78	mg/L	10	1.8	EPA-351.2	ND	A07	5
Ammonia as N	81	mg/L	10	2.5	EPA-350.1	ND	A07	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	4.1	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 12:54	02/28/19 18:37	JRG	PE-OP2	1	B038593
2	SM-2320B	02/25/19 12:00	02/25/19 15:38	MEV	MET-1	2	B031736
3	EPA-300.0	02/22/19 11:00	02/22/19 12:21	SAV	IC5	2	B038441
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	10	B038513
5	EPA-351.2	03/03/19 10:00	03/11/19 10:04	JMH	SC-1	50	B039140
6	EPA-350.1	03/11/19 12:30	03/12/19 09:41	JMH	SC-1	50	B039888
7	EPA-353.2	02/22/19 08:37	02/22/19 08:37	MC1	KONE-1	1	B038554
8	EPA-365.4	03/03/19 10:00	03/11/19 11:01	JMH	SC-1	1	B039141

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Woodland, CA 95695

**Reported:** 03/13/2019 12:41  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905682-02	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW2s, 2/21/2019 9:57:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	13	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	5.8	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	46	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	190	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	170	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	12	mg/L	2.5	0.38	EPA-300.0	1.6	A07	3
Nitrate as N	42	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	40	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	630	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.8	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.12	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	7.3	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 12:56	02/28/19 18:39	JRG	PE-OP2	1	B038593
2	SM-2320B	02/25/19 12:00	02/25/19 15:47	MEV	MET-1	1	B031736
3	EPA-300.0	02/22/19 11:00	02/22/19 12:39	SAV	IC5	5	B038441
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	3.333	B038513
5	EPA-351.2	03/03/19 10:00	03/11/19 08:44	JMH	SC-1	1	B039140
6	EPA-350.1	03/11/19 12:25	03/12/19 09:34	JMH	SC-1	1	B039888
7	EPA-353.2	02/22/19 08:37	02/22/19 08:37	MC1	KONE-1	1	B038554
8	EPA-365.4	03/03/19 10:00	03/11/19 11:16	JMH	SC-1	5	B039141

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**Reported:** 03/13/2019 12:41  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905682-03	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW3s, 2/21/2019 9:37:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	42	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	27	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	140	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	630	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	830	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	140	mg/L	1.0	0.15	EPA-300.0	0.62	A07	3
Nitrate as N	20	mg/L	0.20	0.042	EPA-300.0	ND	A07	3
Sulfate	110	mg/L	2.0	0.26	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	11	mg/L	1.0	0.18	EPA-351.2	ND	A07	5
Ammonia as N	0.62	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.49	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	110	mg/L	3.0	1.0	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:00	02/28/19 18:42	JRG	PE-OP2	1	B038593
2	SM-2320B	02/25/19 12:00	02/25/19 15:53	MEV	MET-1	2	B031736
3	EPA-300.0	02/22/19 11:00	02/22/19 16:51	EMM	IC5	2	B038441
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	10	B038513
5	EPA-351.2	03/03/19 10:00	03/11/19 10:05	JMH	SC-1	5	B039140
6	EPA-350.1	03/11/19 12:30	03/12/19 09:41	JMH	SC-1	1	B039888
7	EPA-353.2	02/22/19 08:37	02/22/19 08:37	MC1	KONE-1	1	B038554
8	EPA-365.4	03/03/19 10:00	03/11/19 11:28	JMH	SC-1	20	B039141

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**Reported:** 03/13/2019 12:41  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905682-04	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW4d, 2/21/2019 8:56:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	47	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	8.5	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	240	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	75	mg/L	5.0	0.77	EPA-300.0	3.1	A07	3
Nitrate as N	140	mg/L	1.0	0.21	EPA-300.0	ND	A07	3
Sulfate	75	mg/L	10	1.3	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	3.6	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.34	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.43	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	8.4	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/22/19 13:02	02/28/19 18:45	JRG	PE-OP2	1	B038593
2	SM-2320B	02/25/19 12:00	02/25/19 15:59	MEV	MET-1	2	B031736
3	EPA-300.0	02/22/19 11:00	02/22/19 15:22	EMM	IC5	10	B038441
4	SM-2540C	02/25/19 14:00	02/25/19 14:00	CAD	MANUAL	5	B038514
5	EPA-351.2	03/03/19 10:00	03/11/19 08:46	JMH	SC-1	1	B039140
6	EPA-350.1	03/11/19 12:30	03/12/19 09:43	JMH	SC-1	1	B039888
7	EPA-353.2	02/22/19 08:37	02/22/19 08:50	MC1	KONE-1	1	B038554
8	EPA-365.4	03/03/19 10:00	03/11/19 11:19	JMH	SC-1	5	B039141

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**Reported:** 03/13/2019 12:41  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031736</b>						
Bicarbonate Alkalinity as CaCO3	B031736-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031736-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031736-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038441</b>						
Chloride	B038441-BLK1	0.31000	mg/L	0.50	0.077	J
Nitrate as N	B038441-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B038441-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B038513</b>						
Total Dissolved Solids @ 180 C	B038513-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038514</b>						
Total Dissolved Solids @ 180 C	B038514-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038554</b>						
Nitrite as N	B038554-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038593</b>						
Dissolved Calcium	B038593-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B038593-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038593-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038593-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039140</b>						
Total Kjeldahl Nitrogen	B039140-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039141</b>						
Total Phosphate	B039141-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039888</b>						
Ammonia as N	B039888-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/13/2019 12:41  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038441</b>										
Chloride	B038441-BS1	LCS	52.710	50.000	mg/L	105		90 - 110		
Nitrate as N	B038441-BS1	LCS	5.1480	5.0000	mg/L	103		90 - 110		
Sulfate	B038441-BS1	LCS	102.12	100.00	mg/L	102		90 - 110		
<b>QC Batch ID: B038513</b>										
Total Dissolved Solids @ 180 C	B038513-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B038514</b>										
Total Dissolved Solids @ 180 C	B038514-BS1	LCS	575.00	586.00	mg/L	98.1		90 - 110		
<b>QC Batch ID: B038554</b>										
Nitrite as N	B038554-BS1	LCS	0.49100	0.50000	mg/L	98.2		90 - 110		
<b>QC Batch ID: B038593</b>										
Dissolved Calcium	B038593-BS1	LCS	9.9115	10.000	mg/L	99.1		85 - 115		
Dissolved Magnesium	B038593-BS1	LCS	9.7287	10.000	mg/L	97.3		85 - 115		
Dissolved Sodium	B038593-BS1	LCS	9.0538	10.000	mg/L	90.5		85 - 115		
Dissolved Potassium	B038593-BS1	LCS	9.4741	10.000	mg/L	94.7		85 - 115		
<b>QC Batch ID: B039140</b>										
Total Kjeldahl Nitrogen	B039140-BS1	LCS	2.1376	2.0000	mg/L	107		90 - 110		
<b>QC Batch ID: B039141</b>										
Total Phosphate	B039141-BS1	LCS	3.0331	3.0660	mg/L	98.9		85 - 115		
<b>QC Batch ID: B039888</b>										
Ammonia as N	B039888-BS1	LCS	0.92260	1.0000	mg/L	92.3		90 - 110		

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Project: Dairy Rep MP - Expanded Suite
Project Number: Paul Caetano Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes multiple QC batches (B031736, B038441, B038513, B038514, B038554, B038593, B039140) and various chemical tests like Bicarbonate Alkalinity, Chloride, Nitrate, Sulfate, etc.

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/13/2019 12:41  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039140</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1905496-02	1.1143	1.0976		mg/L	1.5		20	
	MS	1905496-02	1.1143	3.1160	2.0000	mg/L		100		90 - 110
	MSD	1905496-02	1.1143	3.2777	2.0000	mg/L	5.1	108	20	90 - 110
<b>QC Batch ID: B039141</b>		Used client sample: N								
Total Phosphate	DUP	1905496-02	0.38481	0.35139		mg/L	9.1		20	
	MS	1905496-02	0.38481	3.5372	3.0660	mg/L		103		80 - 120
	MSD	1905496-02	0.38481	3.5261	3.0660	mg/L	0.3	102	20	80 - 120
<b>QC Batch ID: B039888</b>		Used client sample: Y - Description: CAE-MW2s, 02/21/2019 09:57								
Ammonia as N	DUP	1905682-02	0.12500	0.12190		mg/L	2.5		10	J
	MS	1905682-02	0.12500	1.3184	1.1111	mg/L		107		90 - 110
	MSD	1905682-02	0.12500	1.2449	1.1111	mg/L	5.7	101	10	90 - 110

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Woodland, CA 95695

**Reported:** 03/13/2019 12:41  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 03/14/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Robert Gioletti & Sons Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905548

Invoice ID: B333605

Enclosed are the results of analyses for samples received by the laboratory on 2/20/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905548

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



19-05548

Name: Luidhoff and Scalmanini		Report to: Expanded Constituent Suite		Chain of Custody	
Address: 500 First Street		Project: Dairy Representative Monitoring Program		4100 Atlas CL Bakersfield, CA 93308 (661) 327-4911	
City: Woodland		Site: Robert Gioielli & Sons Dairy		Analysis Requested	
State: 95895		Samplers Name: Antonio Del Toro		From Filtered Sample:	From Unfiltered Sample:
Attn: Till Angermann		Global ID - GADAIRY00010		Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl Pe Unpreserved
-1	ROB-MW1s, ROB-MW1d	2/20/19	1026	GW	x
-2	ROB-MW2s, ROB-MW2d		1011		x
-3	ROB-MW3s, ROB-MW3d		1042		x
-4	ROB-MW4s, ROB-MW4d		1058		x
-5	ROB-MW5s, ROB-MW5d		955		x
-6	ROB-MW6s, ROB-MW6d		1307		x
-7	ROB-MW7s, ROB-MW7d		1144		x
-8	ROB-MW8s, ROB-MW8d		1128		x
9	Field Duplicate				
10					
11					
12					

  

Relinquished by: (Signature)	2/20/19 17:20	Received by: (Signature)	2/20/19 17:20
Relinquished by: (Signature)		Received by: (Signature)	2/20/19 22:30
Relinquished by: (Signature)		Received by: (Signature)	

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luidhoff and Scalmanini Consulting Engineers via email: lsc@lsc.com, rory.soni@lsc.com, pthall@lsc.com.  
 4) Send invoices to Jeannette Lovells (jlovels@lsc.com).

(A)= Analysis (C)= Container (P)= Preservative

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Environmental Testing Laboratory Since 1949

## Chain of Custody and Cooler Receipt Form for 1905548 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page ( ) Of ( )

Submission #: 101-05548

<b>SHIPPING INFORMATION</b> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		<b>SHIPPING CONTAINER</b> Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		<b>FREE LIQUID</b> YES <input type="checkbox"/> NO <input type="checkbox"/> W / S	
---	--	---	--	---	--

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time 2/20 2230  
 Temperature: (A) 0.7 °C / (C) 1.0 °C Analyst Init EMC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A			
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
5oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

SHARP HOVENING TIME  
 OF SS  
 NO<sub>3</sub>  
 DO Cl<sub>2</sub> BOD MBAS COC  
 CHWBY DISTRIBUTION  
 SUB-OUT

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: EMC Date/Time: 2-20-19 2259 Rev 21 05/23/2016  
 A = Actual / C = Corrected

[S:\WPDev\WordPerfect\LAB\_DOCS\FORMS\SAMRECrev 20]



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/14/2019 8:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905548-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b>	02/20/2019 10:26
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ROB-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905548-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b>	02/20/2019 10:11
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ROB-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905548-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b>	02/20/2019 10:42
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ROB-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905548-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b>	02/20/2019 10:58
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ROB-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905548-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b>	02/20/2019 09:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ROB-MW5d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/14/2019 8:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1905548-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b>	02/20/2019 12:07
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ROB-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905548-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b>	02/20/2019 11:44
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ROB-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1905548-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/20/2019 22:30
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b>	02/20/2019 11:22
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ROB-MW8s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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**Reported:** 03/14/2019 8:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905548-01		Client Sample Name: Robert Gioletti & Sons Dairy, ROB-MW1s, 2/20/2019 10:26:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	0.018		1
Dissolved Magnesium	42	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	89	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	83	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	400	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	72	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	76	mg/L	1.0	0.21	EPA-300.0	ND	A07	4
Sulfate	46	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		5
Total Kjeldahl Nitrogen	13	mg/L	2.5	0.45	EPA-351.2	ND	A07	6
Ammonia as N	13	mg/L	2.0	0.50	EPA-350.1	ND	A07	7
Nitrite as N	0.015	mg/L	0.050	0.010	EPA-353.2	ND	J	8
Total Phosphate	21	mg/L	0.75	0.25	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 18:35	02/27/19 18:48	JRG	PE-OP2	1	B038582
2	SM-2320B	02/22/19 07:30	02/22/19 12:21	MEV	MET-1	2	B031726
3	EPA-300.0	02/21/19 08:58	02/21/19 20:16	EMM	IC8	5	B038227
4	EPA-300.0	02/21/19 08:58	02/21/19 10:21	SAV	IC8	10	B038227
5	SM-2540C	02/23/19 14:00	02/23/19 14:00	CAD	MANUAL	5	B038464
6	EPA-351.2	03/07/19 20:30	03/13/19 09:03	JMH2	SC-1	12.500	B039694
7	EPA-350.1	03/11/19 12:25	03/12/19 09:21	JMH	SC-1	10	B039887
8	EPA-353.2	02/21/19 10:06	02/21/19 10:06	MC1	KONE-1	1	B038506
9	EPA-365.4	03/01/19 20:30	03/05/19 08:38	JMH	SC-1	5	B039116

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500 First Street  
Woodland, CA 95695

**Reported:** 03/14/2019 8:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905548-02		Client Sample Name: Robert Gioletti & Sons Dairy, ROB-MW2s, 2/20/2019 10:11:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	380	mg/L	0.10	0.016	EPA-200.7	0.018		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	150	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	150	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	980	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	180	mg/L	5.0	0.77	EPA-300.0	ND	A07	3
Nitrate as N	140	mg/L	2.0	0.42	EPA-300.0	ND	A07	4
Sulfate	99	mg/L	10	1.3	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2400	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	1.0	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.13	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.038	mg/L	0.050	0.010	EPA-353.2	ND	J	8
Total Phosphate	7.5	mg/L	0.75	0.25	EPA-365.4	ND	A07	9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 18:40	02/27/19 19:01	JRG	PE-OP2	1	B038582
2	SM-2320B	02/22/19 07:30	02/22/19 12:26	MEV	MET-1	2	B031726
3	EPA-300.0	02/21/19 08:58	02/21/19 20:36	KEB	IC8	10	B038227
4	EPA-300.0	02/21/19 08:58	02/21/19 11:43	SAV	IC8	20	B038227
5	SM-2540C	02/23/19 14:00	02/23/19 14:00	CAD	MANUAL	10	B038464
6	EPA-351.2	03/01/19 20:30	03/04/19 15:30	JMH	SC-1	1	B039114
7	EPA-350.1	03/07/19 12:57	03/08/19 11:10	JMH	SC-1	1	B039572
8	EPA-353.2	02/21/19 10:06	02/21/19 10:07	MC1	KONE-1	1	B038506
9	EPA-365.4	03/01/19 20:30	03/05/19 08:32	JMH	SC-1	5	B039116

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/14/2019 8:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Robert Gioletti & Sons Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905548-03	Client Sample Name:	Robert Gioletti & Sons Dairy, ROB-MW3s, 2/20/2019 10:42:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	320	mg/L	0.10	0.016	EPA-200.7	0.018		1	
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	150	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	22	mg/L	1.0	0.10	EPA-200.7	ND		1	
Bicarbonate Alkalinity as CaCO3	710	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	400	mg/L	2.5	0.38	EPA-300.0	ND	A07	3	
Nitrate as N	51	mg/L	1.0	0.21	EPA-300.0	ND	A07	4	
Sulfate	110	mg/L	5.0	0.65	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		5	
Total Kjeldahl Nitrogen	0.75	mg/L	0.20	0.036	EPA-351.2	ND		6	
Ammonia as N	0.093	mg/L	0.20	0.050	EPA-350.1	ND	J	7	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8	
Total Phosphate	2.1	mg/L	0.15	0.050	EPA-365.4	ND		9	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 18:42	02/27/19 19:04	JRG	PE-OP2	1	B038582
2	SM-2320B	02/22/19 07:30	02/22/19 12:51	MEV	MET-1	2	B031727
3	EPA-300.0	02/21/19 08:58	02/21/19 20:57	KEB	IC8	5	B038227
4	EPA-300.0	02/21/19 08:58	02/21/19 12:03	SAV	IC8	10	B038227
5	SM-2540C	02/23/19 14:00	02/23/19 14:00	CAD	MANUAL	10	B038464
6	EPA-351.2	03/01/19 20:30	03/04/19 15:31	JMH	SC-1	1	B039114
7	EPA-350.1	03/07/19 12:57	03/08/19 11:11	JMH	SC-1	1	B039572
8	EPA-353.2	02/21/19 10:06	02/21/19 10:07	MC1	KONE-1	1	B038506
9	EPA-365.4	03/01/19 20:30	03/05/19 08:01	JMH	SC-1	1	B039116

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Woodland, CA 95695

Reported: 03/14/2019 8:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Robert Gioletti & Sons Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905548-04	Client Sample Name:	Robert Gioletti & Sons Dairy, ROB-MW4s, 2/20/2019 10:58:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	220	mg/L	0.10	0.016	EPA-200.7	0.018		1	
Dissolved Magnesium	74	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	230	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	6.5	mg/L	1.0	0.10	EPA-200.7	ND		1	
Bicarbonate Alkalinity as CaCO3	520	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	230	mg/L	2.5	0.38	EPA-300.0	ND	A07	3	
Nitrate as N	55	mg/L	1.0	0.21	EPA-300.0	ND	A07	4	
Sulfate	270	mg/L	5.0	0.65	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		5	
Total Kjeldahl Nitrogen	0.75	mg/L	0.20	0.036	EPA-351.2	ND		6	
Ammonia as N	0.097	mg/L	0.20	0.050	EPA-350.1	ND	J	7	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8	
Total Phosphate	0.23	mg/L	0.15	0.050	EPA-365.4	ND		9	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 18:45	02/27/19 19:12	JRG	PE-OP2	1	B038582
2	SM-2320B	02/22/19 07:30	02/22/19 13:14	MEV	MET-1	2	B031727
3	EPA-300.0	02/21/19 08:58	02/21/19 21:58	EMM	IC8	5	B038227
4	EPA-300.0	02/21/19 08:58	02/21/19 12:24	SAV	IC8	10	B038227
5	SM-2540C	02/23/19 14:00	02/23/19 14:00	CAD	MANUAL	10	B038464
6	EPA-351.2	03/01/19 20:30	03/04/19 15:33	JMH	SC-1	1	B039114
7	EPA-350.1	03/07/19 12:57	03/08/19 11:12	JMH	SC-1	1	B039572
8	EPA-353.2	02/21/19 10:06	02/21/19 10:30	MC1	KONE-1	1	B038506
9	EPA-365.4	03/01/19 20:30	03/05/19 08:02	JMH	SC-1	1	B039116

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**Reported:** 03/14/2019 8:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905548-05		Client Sample Name: Robert Gioletti & Sons Dairy, ROB-MW5d, 2/20/2019 9:55:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	290	mg/L	0.10	0.016	EPA-200.7	0.018		1
Dissolved Magnesium	100	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	150	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.1	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	570	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	370	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	83	mg/L	1.0	0.21	EPA-300.0	ND	A07	4
Sulfate	86	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.97	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.096	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.025	mg/L	0.050	0.010	EPA-353.2	ND	J	8
Total Phosphate	3.1	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 18:47	02/27/19 19:15	JRG	PE-OP2	1	B038582
2	SM-2320B	02/22/19 07:30	02/22/19 13:20	MEV	MET-1	2	B031727
3	EPA-300.0	02/21/19 08:58	02/21/19 22:19	EMM	IC8	5	B038227
4	EPA-300.0	02/21/19 08:58	02/21/19 12:44	SAV	IC8	10	B038227
5	SM-2540C	02/26/19 13:00	02/26/19 13:00	CAD	MANUAL	10	B038686
6	EPA-351.2	03/01/19 20:30	03/04/19 15:35	JMH	SC-1	1	B039114
7	EPA-350.1	03/07/19 12:57	03/08/19 11:13	JMH	SC-1	1	B039572
8	EPA-353.2	02/21/19 10:06	02/21/19 10:07	MC1	KONE-1	1	B038506
9	EPA-365.4	03/01/19 20:30	03/05/19 08:03	JMH	SC-1	1	B039116

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**Reported:** 03/14/2019 8:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905548-06		Client Sample Name: Robert Gioletti & Sons Dairy, ROB-MW6s, 2/20/2019 12:07:00PM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	270	mg/L	0.10	0.016	EPA-200.7	0.018		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	150	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	150	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	1200	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	360	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	4.8	mg/L	0.50	0.10	EPA-300.0	ND	A07	3
Sulfate	34	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	45	mg/L	5.0	0.90	EPA-351.2	ND	A07	5
Ammonia as N	46	mg/L	20	5.0	EPA-350.1	ND	A07	6
Nitrite as N	0.18	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	5.0	mg/L	0.75	0.25	EPA-365.4	ND	A07	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 18:50	02/27/19 19:17	JRG	PE-OP2	1	B038582
2	SM-2320B	02/22/19 07:30	02/22/19 13:26	MEV	MET-1	2	B031727
3	EPA-300.0	02/21/19 08:58	02/21/19 22:39	EMM	IC8	5	B038227
4	SM-2540C	02/23/19 14:00	02/23/19 14:00	CAD	MANUAL	10	B038464
5	EPA-351.2	03/01/19 20:30	03/04/19 16:26	JMH	SC-1	25	B039114
6	EPA-350.1	03/07/19 12:57	03/08/19 12:01	JMH	SC-1	100	B039572
7	EPA-353.2	02/21/19 10:06	02/21/19 10:10	MC1	KONE-1	1	B038506
8	EPA-365.4	03/01/19 20:30	03/05/19 08:03	JMH	SC-1	5	B039116

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Reported: 03/14/2019 8:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Robert Gioletti & Sons Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905548-07	Client Sample Name:	Robert Gioletti & Sons Dairy, ROB-MW7s, 2/20/2019 11:44:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	160	mg/L	0.10	0.016	EPA-200.7	0.018		1	
Dissolved Magnesium	42	mg/L	0.050	0.019	EPA-200.7	ND		1	
Dissolved Sodium	70	mg/L	0.50	0.051	EPA-200.7	ND		1	
Dissolved Potassium	15	mg/L	1.0	0.10	EPA-200.7	ND		1	
Bicarbonate Alkalinity as CaCO3	230	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	98	mg/L	2.5	0.38	EPA-300.0	ND	A07	3	
Nitrate as N	88	mg/L	1.0	0.21	EPA-300.0	ND	A07	4	
Sulfate	68	mg/L	5.0	0.65	EPA-300.0	ND	A07	3	
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		5	
Total Kjeldahl Nitrogen	0.18	mg/L	0.20	0.036	EPA-351.2	ND	J	6	
Ammonia as N	0.18	mg/L	0.20	0.050	EPA-350.1	ND	J	7	
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8	
Total Phosphate	4.0	mg/L	0.15	0.050	EPA-365.4	ND		9	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 18:52	02/27/19 19:20	JRG	PE-OP2	1	B038582
2	SM-2320B	02/22/19 07:30	02/22/19 13:35	MEV	MET-1	2	B031727
3	EPA-300.0	02/21/19 08:58	02/21/19 23:00	EMM	IC8	5	B038227
4	EPA-300.0	02/21/19 08:58	02/21/19 14:27	SAV	IC8	10	B038227
5	SM-2540C	02/23/19 14:00	02/23/19 14:00	CAD	MANUAL	5	B038464
6	EPA-351.2	03/01/19 20:30	03/04/19 15:37	JMH	SC-1	1	B039114
7	EPA-350.1	03/07/19 12:57	03/08/19 11:15	JMH	SC-1	1	B039572
8	EPA-353.2	02/21/19 10:06	02/21/19 10:10	MC1	KONE-1	1	B038506
9	EPA-365.4	03/01/19 20:30	03/05/19 08:04	JMH	SC-1	1	B039116

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**Reported:** 03/14/2019 8:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905548-08		Client Sample Name: Robert Gioletti & Sons Dairy, ROB-MW8s, 2/20/2019 11:22:00AM, Antonio Morales						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	270	mg/L	0.10	0.016	EPA-200.7	0.018		1
Dissolved Magnesium	93	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	4.5	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	770	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	200	mg/L	2.5	0.38	EPA-300.0	ND	A07	3
Nitrate as N	53	mg/L	1.0	0.21	EPA-300.0	ND	A07	4
Sulfate	90	mg/L	5.0	0.65	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.73	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.098	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	0.27	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/21/19 18:55	02/27/19 19:23	JRG	PE-OP2	1	B038582
2	SM-2320B	02/22/19 07:30	02/22/19 13:40	MEV	MET-1	2	B031727
3	EPA-300.0	02/21/19 08:58	02/21/19 23:20	EMM	IC8	5	B038227
4	EPA-300.0	02/21/19 08:58	02/21/19 14:47	SAV	IC8	10	B038227
5	SM-2540C	02/23/19 14:00	02/23/19 14:00	CAD	MANUAL	10	B038464
6	EPA-351.2	03/01/19 20:30	03/04/19 15:37	JMH	SC-1	1	B039114
7	EPA-350.1	03/07/19 12:57	03/08/19 11:15	JMH	SC-1	1	B039572
8	EPA-353.2	02/21/19 10:06	02/21/19 10:10	MC1	KONE-1	1	B038506
9	EPA-365.4	03/01/19 20:30	03/05/19 08:05	JMH	SC-1	1	B039116

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**Reported:** 03/14/2019 8:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031726</b>						
Bicarbonate Alkalinity as CaCO3	B031726-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031726-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031726-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031727</b>						
Bicarbonate Alkalinity as CaCO3	B031727-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031727-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031727-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038227</b>						
Chloride	B038227-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B038227-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B038227-BLK1	ND	mg/L	1.0	0.13	
<b>QC Batch ID: B038464</b>						
Total Dissolved Solids @ 180 C	B038464-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038506</b>						
Nitrite as N	B038506-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038582</b>						
Dissolved Calcium	B038582-BLK1	0.017510	mg/L	0.10	0.016	J
Dissolved Magnesium	B038582-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B038582-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B038582-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B038686</b>						
Total Dissolved Solids @ 180 C	B038686-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B039114</b>						
Total Kjeldahl Nitrogen	B039114-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039116</b>						
Total Phosphate	B039116-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B039572</b>						
Ammonia as N	B039572-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B039694</b>						
Total Kjeldahl Nitrogen	B039694-BLK1	ND	mg/L	0.20	0.036	

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**Reported:** 03/14/2019 8:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B039887</b>						
Ammonia as N	B039887-BLK1	ND	mg/L	0.20	0.050	

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**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038227</b>										
Chloride	B038227-BS1	LCS	52.278	50.000	mg/L	105		90 - 110		
Nitrate as N	B038227-BS1	LCS	5.1380	5.0000	mg/L	103		90 - 110		
Sulfate	B038227-BS1	LCS	102.92	100.00	mg/L	103		90 - 110		
<b>QC Batch ID: B038464</b>										
Total Dissolved Solids @ 180 C	B038464-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B038506</b>										
Nitrite as N	B038506-BS1	LCS	0.49815	0.50000	mg/L	99.6		90 - 110		
<b>QC Batch ID: B038582</b>										
Dissolved Calcium	B038582-BS1	LCS	10.801	10.000	mg/L	108		85 - 115		
Dissolved Magnesium	B038582-BS1	LCS	10.429	10.000	mg/L	104		85 - 115		
Dissolved Sodium	B038582-BS1	LCS	9.8364	10.000	mg/L	98.4		85 - 115		
Dissolved Potassium	B038582-BS1	LCS	8.8913	10.000	mg/L	88.9		85 - 115		
<b>QC Batch ID: B038686</b>										
Total Dissolved Solids @ 180 C	B038686-BS1	LCS	600.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B039114</b>										
Total Kjeldahl Nitrogen	B039114-BS1	LCS	1.9652	2.0000	mg/L	98.3		90 - 110		
<b>QC Batch ID: B039116</b>										
Total Phosphate	B039116-BS1	LCS	3.0901	3.0660	mg/L	101		85 - 115		
<b>QC Batch ID: B039572</b>										
Ammonia as N	B039572-BS1	LCS	0.97870	1.0000	mg/L	97.9		90 - 110		
<b>QC Batch ID: B039694</b>										
Total Kjeldahl Nitrogen	B039694-BS1	LCS	1.9301	2.0000	mg/L	96.5		90 - 110		
<b>QC Batch ID: B039887</b>										
Ammonia as N	B039887-BS1	LCS	0.92810	1.0000	mg/L	92.8		90 - 110		

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Luhdorf & Scalmanini
500 First Street
Woodland, CA 95695

Reported: 03/14/2019 8:29
Project: Dairy Rep MP - Expanded Suite
Project Number: Robert Gioletti & Sons Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC Batch IDs B031726, B031727, B038227, B038464, B038506, and B038582.

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500 First Street  
Woodland, CA 95695

Reported: 03/14/2019 8:29  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Robert Gioletti & Sons Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B038686</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1905793-01	13800	14300		mg/L	3.6		10	
<b>QC Batch ID: B039114</b>		Used client sample: Y - Description: ROB-MW1s, 02/20/2019 10:26								
Total Kjeldahl Nitrogen	DUP	1905548-01	9.6490	10.362		mg/L	7.1		20	
	MS	1905548-01	9.6490	11.112	2.0000	mg/L		73.2		Q03
	MSD	1905548-01	9.6490	10.626	2.0000	mg/L	4.5	48.8	20	90 - 110 Q03
<b>QC Batch ID: B039116</b>		Used client sample: Y - Description: ROB-MW1s, 02/20/2019 10:26								
Total Phosphate	DUP	1905548-01	21.353	21.399		mg/L	0.2		20	
	MS	1905548-01	21.353	24.111	3.0660	mg/L		90.0		80 - 120
	MSD	1905548-01	21.353	24.142	3.0660	mg/L	0.1	91.0	20	80 - 120
<b>QC Batch ID: B039572</b>		Used client sample: N								
Ammonia as N	DUP	1905316-09	0.10290	0.092300		mg/L	10.9		10	J,A02
	MS	1905316-09	0.10290	1.2306	1.1111	mg/L		101		90 - 110
	MSD	1905316-09	0.10290	1.1816	1.1111	mg/L	4.1	97.1	10	90 - 110
<b>QC Batch ID: B039694</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1905930-01	0.099800	0.075000		mg/L	28.4		20	J,A02
	MS	1905930-01	0.099800	2.1128	2.0000	mg/L		101		90 - 110
	MSD	1905930-01	0.099800	2.1043	2.0000	mg/L	0.4	100	20	90 - 110
<b>QC Batch ID: B039887</b>		Used client sample: N								
Ammonia as N	DUP	1907140-02	0.15970	0.18330		mg/L	13.8		10	J,A02
	MS	1907140-02	0.15970	1.2694	1.1111	mg/L		99.9		90 - 110
	MSD	1907140-02	0.15970	1.3886	1.1111	mg/L	9.0	111	10	90 - 110 Q03

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/14/2019 8:29  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.







Date of Report: 03/22/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Woods Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1905974

Invoice ID: B334520

Enclosed are the results of analyses for samples received by the laboratory on 2/25/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1905974

Samples were filtered through a 0.45 micron filter for requested analysis.



<b>Chain of Custody</b>		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911					
<b>Report to:</b>		<b>Analysis Requested</b>					
BC Laboratories, Inc. 19-05974 Expanded Constituent Suite Project: Dairy Representative Monitoring Program Site: Woods Dairy Samplers Name: <b>DON LIGHT DETEC</b> Global ID - WDR100039199		From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3				
Name: Luhdorff and Scalmanini Address: 500 First Street City: Woodland State: 95695 Attn: Till Angermann		From Filtered Sample: Ammonia-N, NO3-N, NO2-N					
Lab # -1 -2 -3 4 5 6 7 8 9 10 11 12	Strike out non-sampled wells WOO-MW1 WOO-MW2 WOO-MW3 Field Duplicate #b	Date Sampled 2/25/19 1318 1430 1345 --- --- --- --- --- --- --- --- --- ---	Time Sampled 1518 1430 1345 --- --- --- --- --- --- --- --- --- --- ---	Matrix B.W. --- --- --- --- --- --- --- --- --- --- --- ---	Qt Po Unpreserved x x x x --- --- --- --- --- --- --- --- ---	From Filtered Sample: Ammonia-N, NO3-N, NO2-N x x x x x x x x x x x x x	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3 x x x x x x x x x x x x x
<b>Comments:</b> 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lsce.com, rboyson@lsce.com, pdhalliwell@lsce.com, jlovells@lsce.com 4) Send invoices to Jeanette Lovells (jlovells@lsce.com).		Relinquished by: (Signature) <i>[Signature]</i> Date & Time 2/25/19 16:17 Relinquished by: (Signature) <i>[Signature]</i> Date & Time 2/25/19 22:15 Relinquished by: (Signature) <i>[Signature]</i> Date & Time 2/25/19 22:15					

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LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-05974

SHIPPING INFORMATION <input type="checkbox"/> Express <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> <input checked="" type="checkbox"/> Lab Field Service <input type="checkbox"/> Other (Specify) _____		SHIPPING CONTAINER <input checked="" type="checkbox"/> Ice Chest <input type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> <input type="checkbox"/> Other (Specify) _____		FREE LIQUID <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> W / S	
---	--	---	--	---	--

Refrigerant:  Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Study Seals:  Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

Samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/25/2016  
 Temperature: (A) 4.2 °C / (C) 4.5 °C Analyst Init: EM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
PE UNPRES	A	A	A	A						
/ 8oz / 16oz PE UNPRES										
Cr <sup>6</sup>										
INORGANIC CHEMICAL METALS										
ORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
CYANIDE										
NITROGEN FORMS										
TOTAL SULFIDE										
NITRATE / NITRITE										
TOTAL ORGANIC CARBON										
CHEMICAL OXYGEN DEMAND										
PHENOLICS										
ml VOA VIAL TRAVEL BLANK										
ml VOA VIAL										
EPA 1664										
ODOR										
BIOLOGICAL										
STERIOLOGICAL										
ml VOA VIAL- 504										
EPA 508/608/8080										
EPA 515.1/3150										
EPA 525										
EPA 525 TRAVEL BLANK										
ml EPA 547										
ml EPA 531.1										
EPA 548										
EPA 549										
EPA 8015M										
EPA 8270										
z / 16oz / 32oz AMBER										
z / 16oz / 32oz JAR										
ML SLEEVE										
2B VIAL										
ASTIC BAG										
DLAR BAG										
RRIOUS IRON										
SCORE										
ART KIT										
IMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: EM Date/Time: 2-25-16 2240 Rev 21 05/23/2016  
 = Actual / C = Corrected (S:\WPDoc\WordPerfect\LAB\_DOC\FORMS\SAMREC1ev 20)

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/22/2019 10:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1905974-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Woods Dairy	<b>Sampling Date:</b> 02/25/2019 15:18
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> WOO-MW1	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Don Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905974-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Woods Dairy	<b>Sampling Date:</b> 02/25/2019 14:30
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> WOO-MW2	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Don Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905974-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Woods Dairy	<b>Sampling Date:</b> 02/25/2019 13:45
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> WOO-MW3	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Don Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1905974-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/25/2019 22:15
	<b>Project Number:</b> Woods Dairy	<b>Sampling Date:</b> 02/25/2019 00:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Field Dup #6	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Don Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/22/2019 10:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1905974-01		Client Sample Name: Woods Dairy, WOO-MW1, 2/25/2019 3:18:00PM, Del-Tech/Don Light						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	160	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	61	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	110	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.7	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	520	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	110	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	29	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	79	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	980	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.31	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.062	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.68	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 10:00	03/06/19 18:03	JRG	PE-OP2	1	B039078
2	SM-2320B	02/26/19 14:00	02/26/19 18:22	MEV	MET-1	2	B031745
3	EPA-300.0	02/26/19 13:00	02/26/19 20:02	EMM	IC2	2	B038699
4	SM-2540C	02/28/19 13:30	02/28/19 13:30	CAD	MANUAL	5	B038952
5	EPA-351.2	03/08/19 12:30	03/11/19 13:10	JMH	SC-1	1	B039770
6	EPA-350.1	03/20/19 13:42	03/21/19 10:56	JMH	SC-1	1	B040846
7	EPA-353.2	02/26/19 11:27	02/26/19 11:27	MC1	KONE-1	1	B038893
8	EPA-365.4	03/08/19 12:30	03/12/19 12:31	JMH	SC-1	1	B039772

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/22/2019 10:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905974-02	<b>Client Sample Name:</b> Woods Dairy, WOO-MW2, 2/25/2019 2:30:00PM, Del-Tech/Don Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	95	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	44	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	62	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	0.97	mg/L	1.0	0.10	EPA-200.7	ND	J	1
Bicarbonate Alkalinity as CaCO3	420	mg/L	4.1	4.1	SM-2320B	ND		2
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Hydroxide Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	28	mg/L	0.50	0.067	EPA-300.0	ND		3
Nitrate as N	17	mg/L	0.10	0.019	EPA-300.0	ND		3
Sulfate	26	mg/L	1.0	0.14	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	580	mg/L	33	17	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.16	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	0.057	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.50	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 10:05	03/06/19 18:06	JRG	PE-OP2	1	B039078
2	SM-2320B	02/26/19 14:00	02/26/19 18:28	MEV	MET-1	1	B031745
3	EPA-300.0	02/26/19 13:00	02/26/19 19:42	EMM	IC2	1	B038699
4	SM-2540C	02/28/19 13:30	02/28/19 13:30	CAD	MANUAL	3.333	B038952
5	EPA-351.2	03/08/19 12:30	03/11/19 13:11	JMH	SC-1	1	B039770
6	EPA-350.1	03/20/19 13:42	03/21/19 10:11	JMH	SC-1	1	B040846
7	EPA-353.2	02/26/19 11:27	02/26/19 11:27	MC1	KONE-1	1	B038893
8	EPA-365.4	03/08/19 12:30	03/12/19 12:32	JMH	SC-1	1	B039772

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/22/2019 10:21  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Woods Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1905974-03	Client Sample Name:	Woods Dairy, WOO-MW3, 2/25/2019 1:45:00PM, Del-Tech/Don Light					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	62	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	95	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.2	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	450	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	96	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	48	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	54	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	940	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.31	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.052	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.13	mg/L	0.15	0.050	EPA-365.4	ND	J	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 10:10	03/06/19 18:16	JRG	PE-OP2	1	B039078
2	SM-2320B	02/26/19 14:00	02/26/19 18:36	MEV	MET-1	2	B031745
3	EPA-300.0	02/26/19 13:00	02/26/19 19:00	EMM	IC2	5	B038699
4	SM-2540C	02/28/19 13:30	02/28/19 13:30	CAD	MANUAL	5	B038952
5	EPA-351.2	03/08/19 12:30	03/11/19 14:43	JMH	SC-1	1	B039770
6	EPA-350.1	03/20/19 13:42	03/21/19 10:12	JMH	SC-1	1	B040846
7	EPA-353.2	02/26/19 11:27	02/26/19 11:27	MC1	KONE-1	1	B038893
8	EPA-365.4	03/08/19 12:30	03/12/19 12:33	JMH	SC-1	1	B039772

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/22/2019 10:21  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Woods Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1905974-04	<b>Client Sample Name:</b> Woods Dairy, Field Dup #6, 2/25/2019 12:00:00AM, Del-Tech/Don Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	160	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	61	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	100	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.7	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	520	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	98	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	29	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	74	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	920	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.30	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.056	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.71	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 10:15	03/06/19 18:19	JRG	PE-OP2	1	B039078
2	SM-2320B	02/27/19 12:00	02/27/19 15:03	MEV	MET-1	2	B031748
3	EPA-300.0	02/26/19 13:00	02/26/19 19:21	EMM	IC2	5	B038699
4	SM-2540C	02/28/19 13:30	02/28/19 13:30	CAD	MANUAL	5	B038952
5	EPA-351.2	03/08/19 12:30	03/11/19 14:45	JMH	SC-1	1	B039770
6	EPA-350.1	03/20/19 13:42	03/21/19 10:13	JMH	SC-1	1	B040846
7	EPA-353.2	02/26/19 11:27	02/26/19 11:29	MC1	KONE-1	1	B038893
8	EPA-365.4	03/08/19 12:30	03/12/19 12:34	JMH	SC-1	1	B039772

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/22/2019 10:21  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Woods Dairy  
Project Manager: Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031745</b>						
Bicarbonate Alkalinity as CaCO3	B031745-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031745-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031745-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031748</b>						
Bicarbonate Alkalinity as CaCO3	B031748-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031748-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031748-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038699</b>						
Chloride	B038699-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038699-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038699-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038893</b>						
Nitrite as N	B038893-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038952</b>						
Total Dissolved Solids @ 180 C	B038952-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B039078</b>						
Dissolved Calcium	B039078-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039078-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039078-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B039078-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039770</b>						
Total Kjeldahl Nitrogen	B039770-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039772</b>						
Total Phosphate	B039772-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040846</b>						
Ammonia as N	B040846-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/22/2019 10:21  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Woods Dairy  
Project Manager: Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038699</b>										
Chloride	B038699-BS1	LCS	50.263	50.000	mg/L	101		90 - 110		
Nitrate as N	B038699-BS1	LCS	4.9260	5.0000	mg/L	98.5		90 - 110		
Sulfate	B038699-BS1	LCS	99.757	100.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B038893</b>										
Nitrite as N	B038893-BS1	LCS	0.49914	0.50000	mg/L	99.8		90 - 110		
<b>QC Batch ID: B038952</b>										
Total Dissolved Solids @ 180 C	B038952-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B039078</b>										
Dissolved Calcium	B039078-BS1	LCS	10.109	10.000	mg/L	101		85 - 115		
Dissolved Magnesium	B039078-BS1	LCS	10.319	10.000	mg/L	103		85 - 115		
Dissolved Sodium	B039078-BS1	LCS	9.1438	10.000	mg/L	91.4		85 - 115		
Dissolved Potassium	B039078-BS1	LCS	9.4391	10.000	mg/L	94.4		85 - 115		
<b>QC Batch ID: B039770</b>										
Total Kjeldahl Nitrogen	B039770-BS1	LCS	2.0207	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B039772</b>										
Total Phosphate	B039772-BS1	LCS	3.0932	3.0660	mg/L	101		85 - 115		
<b>QC Batch ID: B040846</b>										
Ammonia as N	B040846-BS1	LCS	0.96930	1.0000	mg/L	96.9		90 - 110		

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Luhdorf & Scalmanini
500 First Street
Woodland, CA 95695

Reported: 03/22/2019 10:21
Project: Dairy Rep MP - Expanded Suite
Project Number: Woods Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC batches B031745, B031748, B038699, B038893, B038952, and B039078.

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/22/2019 10:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B039770</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1907172-02	1.8355	1.8515		mg/L	0.9		20	
	MS	1907172-02	1.8355	7.3205	5.0000	mg/L		110		90 - 110
	MSD	1907172-02	1.8355	7.3525	5.0000	mg/L	0.4	110	20	90 - 110
<b>QC Batch ID: B039772</b>		Used client sample: N								
Total Phosphate	DUP	1907172-02	10.401	10.278		mg/L	1.2		20	
	MS	1907172-02	10.401	17.897	7.6650	mg/L		97.8		80 - 120
	MSD	1907172-02	10.401	17.859	7.6650	mg/L	0.2	97.3	20	80 - 120
<b>QC Batch ID: B040846</b>		Used client sample: Y - Description: WOO-MW1, 02/25/2019 15:18								
Ammonia as N	DUP	1905974-01	0.062200	ND		mg/L			10	
	MS	1905974-01	0.062200	1.1506	1.1111	mg/L		98.0		90 - 110
	MSD	1905974-01	0.062200	1.1566	1.1111	mg/L	0.5	98.5	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/22/2019 10:21  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.







Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Antone L. Gomes & Sons Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1906167

Invoice ID: B334835

Enclosed are the results of analyses for samples received by the laboratory on 2/26/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1906167

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



**Chain of Custody**

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

**BC Laboratories, Inc.**  
19-06167

Report to: Expanded Constituent Suite

Name: Luhdorff and Scalmani  
Address: 500 First Street  
City: Woodland  
State: 95695  
Attn: Till Angermann

Project: Dairy Representative Monitoring Program  
Site: Antonio L. Gomez & Sons Dairy  
Samplers Name: *Del Teal / Stee Light*  
Global ID - GADAIRY00011

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Analysis Requested	
					From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
1	<del>ANT-MW1a, ANT-MW1b, ANT-MW1c, ANT-MW1d</del> -1	2-26-19	14:26	bcw	x	x
2	ANT-MW2a, ANT-MW2d		19:19		x	x
3	ANT-MW3a, <del>ANT-MW3b, ANT-MW3c</del> -2		14:03		x	x
4	ANT-MW4a, <del>ANT-MW4b, ANT-MW4c</del> -3		13:44		x	x
5	ANT-MW5a, ANT-MW5d		NA		x	x
6	ANT-MW6a, ANT-MW6d -4		17:52		x	x
7	Field-Duplicate				x	x
8						
9						
10						
11						
12						

Relinquished by: (Signature) *Stee Light* 2-26-19 Date & Time 2/26/19 15:45  
 Relinquished by: (Signature) *Del Teal* Date & Time 2/26/19 22:00  
 Relinquished by: (Signature) \_\_\_\_\_ Date & Time \_\_\_\_\_

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhdorff and Scalmani Consulting Engineers via email: llavegrina@lscce.com, rryson@lscce.com, pdhalwa@lscce.com, jlovell@lscce.com  
 4) Send invoices to Jeanette Lovell (jlovell@lscce.com).

(A) = Analysis (C) = Container (P) = Preservative

*\* mw 2 & mw 5 not sampled - NO access*

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-06167

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/26 2200  
Temperature: (A) 2.4 °C / (C) 2.7 °C Analyst Init: EMR

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/803										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

SHORT HOLDING TIME  
C<sup>+</sup>e (NO<sub>2</sub>) (NO<sub>3</sub>) OP SS  
DO Cl<sub>2</sub> BOD MBAS CO  
CHK BY: [Signature]  
DISTRIBUTION: [Signature]  
SUB-OUT: [Signature]

Comments: \_\_\_\_\_  
Sample Numbering Completed By: EMR Date/Time: 2-26-19 2235 Rev 21 05/23/2016  
A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 13:09  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1906167-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/26/2019 22:00
	<b>Project Number:</b> Antone L. Gomes & Sons Dairy	<b>Sampling Date:</b> 02/26/2019 14:26
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ANT-MW1d	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1906167-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/26/2019 22:00
	<b>Project Number:</b> Antone L. Gomes & Sons Dairy	<b>Sampling Date:</b> 02/26/2019 14:03
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ANT-MW3s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1906167-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/26/2019 22:00
	<b>Project Number:</b> Antone L. Gomes & Sons Dairy	<b>Sampling Date:</b> 02/26/2019 13:44
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ANT-MW4s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1906167-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/26/2019 22:00
	<b>Project Number:</b> Antone L. Gomes & Sons Dairy	<b>Sampling Date:</b> 02/26/2019 14:52
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ANT-MW6s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 13:09  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Antone L. Gomes & Sons Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906167-01	<b>Client Sample Name:</b> Antone L. Gomes & Sons Dairy, ANT-MW1d, 2/26/2019 2:26:00PM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	140	mg/L	0.50	0.051	EPA-200.7	0.073		1
Dissolved Potassium	6.0	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	610	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	160	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	55	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	120	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.74	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.10	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.010	mg/L	0.050	0.010	EPA-353.2	ND	J	8
Total Phosphate	0.50	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 14:10	03/07/19 16:24	JRG	PE-OP2	1	B039080
2	SM-2320B	02/28/19 12:00	02/28/19 13:49	MEV	MET-1	2	B031757
3	EPA-300.0	03/13/19 17:00	03/13/19 20:39	KEB	IC1	5	B040321
4	EPA-300.0	02/27/19 22:06	02/28/19 03:56	SAV	IC2	5	B038861
5	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	10	B038954
6	EPA-351.2	03/10/19 14:30	03/13/19 13:07	JMH	SC-1	1	B039849
7	EPA-350.1	03/23/19 12:00	03/26/19 08:12	JMH	SC-1	1	B041100
8	EPA-353.2	02/27/19 09:34	02/27/19 10:20	MC1	KONE-1	1	B038966
9	EPA-365.4	03/10/19 14:30	03/13/19 15:34	JMH	SC-1	1	B039850

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500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 13:09  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Antone L. Gomes & Sons Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906167-02	<b>Client Sample Name:</b> Antone L. Gomes & Sons Dairy, ANT-MW3s, 2/26/2019 2:03:00PM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	180	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	120	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	140	mg/L	0.50	0.051	EPA-200.7	0.073		1
Dissolved Potassium	3.7	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	550	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	250	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	63	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	170	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.047	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	0.067	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	ND	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 14:15	03/07/19 16:40	JRG	PE-OP2	1	B039080
2	SM-2320B	02/28/19 12:00	02/28/19 13:56	MEV	MET-1	2	B031757
3	EPA-300.0	02/27/19 22:06	02/28/19 05:19	SAV	IC2	5	B038861
4	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	10	B038954
5	EPA-351.2	03/10/19 14:30	03/13/19 13:11	JMH	SC-1	1	B039849
6	EPA-350.1	03/23/19 12:00	03/26/19 08:13	JMH	SC-1	1	B041100
7	EPA-353.2	02/27/19 09:34	02/27/19 10:20	MC1	KONE-1	1	B038966
8	EPA-365.4	03/10/19 14:30	03/13/19 15:37	JMH	SC-1	1	B039850

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**Reported:** 03/26/2019 13:09  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906167-03	<b>Client Sample Name:</b> Antone L. Gomes & Sons Dairy, ANT-MW4s, 2/26/2019 1:44:00PM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	110	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	180	mg/L	0.50	0.051	EPA-200.7	0.073		1
Dissolved Potassium	2.8	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	710	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	190	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	24	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	150	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1300	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.17	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	0.056	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.024	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.063	mg/L	0.15	0.050	EPA-365.4	ND	J	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 14:20	03/07/19 16:48	JRG	PE-OP2	1	B039080
2	SM-2320B	02/28/19 12:00	02/28/19 14:02	MEV	MET-1	2	B031757
3	EPA-300.0	02/27/19 22:06	02/28/19 05:39	SAV	IC2	2	B038861
4	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	10	B038954
5	EPA-351.2	03/10/19 14:30	03/13/19 13:12	JMH	SC-1	1	B039849
6	EPA-350.1	03/23/19 12:00	03/26/19 08:14	JMH	SC-1	1	B041100
7	EPA-353.2	02/27/19 09:34	02/27/19 10:20	MC1	KONE-1	1	B038966
8	EPA-365.4	03/10/19 14:30	03/13/19 15:38	JMH	SC-1	1	B039850

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**Reported:** 03/26/2019 13:09  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906167-04	<b>Client Sample Name:</b> Antone L. Gomes & Sons Dairy, ANT-MW6s, 2/26/2019 2:52:00PM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	75	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	84	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	100	mg/L	0.50	0.051	EPA-200.7	0.073		1
Dissolved Potassium	70	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	410	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	150	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	30	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	120	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.36	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.069	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.10	mg/L	0.15	0.050	EPA-365.4	ND	J	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 14:25	03/07/19 16:50	JRG	PE-OP2	1	B039080
2	SM-2320B	02/28/19 12:00	02/28/19 14:09	MEV	MET-1	2	B031757
3	EPA-300.0	02/27/19 22:06	02/28/19 06:00	SAV	IC2	2	B038861
4	SM-2540C	02/28/19 14:30	02/28/19 14:30	CAD	MANUAL	5	B038954
5	EPA-351.2	03/10/19 14:30	03/13/19 13:13	JMH	SC-1	1	B039849
6	EPA-350.1	03/23/19 12:00	03/26/19 08:15	JMH	SC-1	1	B041100
7	EPA-353.2	02/27/19 10:37	02/27/19 10:37	MC1	KONE-1	1	B038967
8	EPA-365.4	03/10/19 14:30	03/13/19 15:39	JMH	SC-1	1	B039850

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**Reported:** 03/26/2019 13:09  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031757</b>						
Bicarbonate Alkalinity as CaCO3	B031757-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031757-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031757-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038861</b>						
Chloride	B038861-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038861-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038861-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038954</b>						
Total Dissolved Solids @ 180 C	B038954-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B038966</b>						
Nitrite as N	B038966-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038967</b>						
Nitrite as N	B038967-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039080</b>						
Dissolved Calcium	B039080-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039080-BLK1	ND	mg/L	0.050	0.019	
<b>Dissolved Sodium</b>	<b>B039080-BLK1</b>	<b>0.073048</b>	<b>mg/L</b>	<b>0.50</b>	<b>0.051</b>	<b>J</b>
Dissolved Potassium	B039080-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039849</b>						
Total Kjeldahl Nitrogen	B039849-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039850</b>						
Total Phosphate	B039850-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040321</b>						
Chloride	B040321-BLK1	ND	mg/L	0.50	0.067	
Sulfate	B040321-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B041100</b>						
Ammonia as N	B041100-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/26/2019 13:09  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038861</b>										
Chloride	B038861-BS1	LCS	52.260	50.000	mg/L	105		90 - 110		
Nitrate as N	B038861-BS1	LCS	5.1730	5.0000	mg/L	103		90 - 110		
Sulfate	B038861-BS1	LCS	104.25	100.00	mg/L	104		90 - 110		
<b>QC Batch ID: B038954</b>										
Total Dissolved Solids @ 180 C	B038954-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B038966</b>										
Nitrite as N	B038966-BS1	LCS	0.50790	0.50000	mg/L	102		90 - 110		
<b>QC Batch ID: B038967</b>										
Nitrite as N	B038967-BS1	LCS	0.52229	0.50000	mg/L	104		90 - 110		
<b>QC Batch ID: B039080</b>										
Dissolved Calcium	B039080-BS1	LCS	10.032	10.000	mg/L	100		85 - 115		
Dissolved Magnesium	B039080-BS1	LCS	10.081	10.000	mg/L	101		85 - 115		
Dissolved Sodium	B039080-BS1	LCS	9.1734	10.000	mg/L	91.7		85 - 115		
Dissolved Potassium	B039080-BS1	LCS	9.3099	10.000	mg/L	93.1		85 - 115		
<b>QC Batch ID: B039849</b>										
Total Kjeldahl Nitrogen	B039849-BS1	LCS	1.9603	2.0000	mg/L	98.0		90 - 110		
<b>QC Batch ID: B039850</b>										
Total Phosphate	B039850-BS1	LCS	3.0702	3.0660	mg/L	100		85 - 115		
<b>QC Batch ID: B040321</b>										
Chloride	B040321-BS1	LCS	49.440	50.000	mg/L	98.9		90 - 110		
Sulfate	B040321-BS1	LCS	98.418	100.00	mg/L	98.4		90 - 110		
<b>QC Batch ID: B041100</b>										
Ammonia as N	B041100-BS1	LCS	1.0462	1.1111	mg/L	94.2		90 - 110		

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Reported: 03/26/2019 13:09  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Antone L. Gomes & Sons Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B031757</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1906166-09	811.17	810.26		mg/L	0.1		10	
Carbonate Alkalinity as CaCO3	DUP	1906166-09	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1906166-09	ND	ND		mg/L			10	
<b>QC Batch ID: B038861</b>		Used client sample: Y - Description: ANT-MW1d, 02/26/2019 14:26								
Chloride	DUP	1906167-01	174.04	172.44		mg/L	0.9		10	
	MS	1906167-01	174.04	460.77	252.53	mg/L		114		80 - 120
	MSD	1906167-01	174.04	462.36	252.53	mg/L	0.3	114	10	80 - 120
Nitrate as N	DUP	1906167-01	55.040	55.300		mg/L	0.5		10	
	MS	1906167-01	55.040	81.495	25.253	mg/L		105		80 - 120
	MSD	1906167-01	55.040	81.677	25.253	mg/L	0.2	105	10	80 - 120
Sulfate	DUP	1906167-01	134.75	121.78		mg/L	10.1		10	Q01
	MS	1906167-01	134.75	686.57	505.05	mg/L		109		80 - 120
	MSD	1906167-01	134.75	685.61	505.05	mg/L	0.1	109	10	80 - 120
<b>QC Batch ID: B038954</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1905936-01	27300	27000		mg/L	1.1		10	
<b>QC Batch ID: B038966</b>		Used client sample: N								
Nitrite as N	DUP	1906166-03	ND	ND		mg/L			10	
	MS	1906166-03	ND	0.51809	0.50000	mg/L		104		90 - 110
	MSD	1906166-03	ND	0.52402	0.50000	mg/L	1.1	105	10	90 - 110
<b>QC Batch ID: B038967</b>		Used client sample: Y - Description: ANT-MW6s, 02/26/2019 14:52								
Nitrite as N	DUP	1906167-04	ND	ND		mg/L			10	
	MS	1906167-04	ND	0.54681	0.52632	mg/L		104		90 - 110
	MSD	1906167-04	ND	0.54468	0.52632	mg/L	0.4	103	10	90 - 110
<b>QC Batch ID: B039080</b>		Used client sample: Y - Description: ANT-MW1d, 02/26/2019 14:26								
Dissolved Calcium	DUP	1906167-01	151.47	150.26		mg/L	0.8		20	
	MS	1906167-01	151.47	163.55	10.204	mg/L		118		A03
	MSD	1906167-01	151.47	158.00	10.204	mg/L	3.5	64.0	20	85 - 115 A03
Dissolved Magnesium	DUP	1906167-01	114.60	115.75		mg/L	1.0		20	
	MS	1906167-01	114.60	125.47	10.204	mg/L		106		85 - 115
	MSD	1906167-01	114.60	124.88	10.204	mg/L	0.5	101	20	85 - 115
Dissolved Sodium	DUP	1906167-01	137.36	135.27		mg/L	1.5		20	
	MS	1906167-01	137.36	149.29	10.204	mg/L		117		85 - 115 A03
	MSD	1906167-01	137.36	144.08	10.204	mg/L	3.6	65.8	20	85 - 115 A03
Dissolved Potassium	DUP	1906167-01	5.9881	5.9186		mg/L	1.2		20	
	MS	1906167-01	5.9881	16.260	10.204	mg/L		101		85 - 115
	MSD	1906167-01	5.9881	16.418	10.204	mg/L	1.0	102	20	85 - 115

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**Reported:** 03/26/2019 13:09  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B039849</b>		Used client sample: Y - Description: ANT-MW1d, 02/26/2019 14:26								
Total Kjeldahl Nitrogen	DUP	1906167-01	0.73680	0.73870		mg/L	0.3		20	
	MS	1906167-01	0.73680	2.5368	2.0000	mg/L		90.0		90 - 110
	MSD	1906167-01	0.73680	2.4977	2.0000	mg/L	1.6	88.0	20	90 - 110 Q03
<b>QC Batch ID: B039850</b>		Used client sample: Y - Description: ANT-MW1d, 02/26/2019 14:26								
Total Phosphate	DUP	1906167-01	0.49887	0.45932		mg/L	8.3		20	
	MS	1906167-01	0.49887	3.6350	3.0660	mg/L		102		80 - 120
	MSD	1906167-01	0.49887	3.6411	3.0660	mg/L	0.2	102	20	80 - 120
<b>QC Batch ID: B040321</b>		Used client sample: N								
Chloride	DUP	1907986-01	8.9790	8.9640		mg/L	0.2		10	
	MS	1907986-01	8.9790	62.584	50.505	mg/L		106		80 - 120
	MSD	1907986-01	8.9790	62.833	50.505	mg/L	0.4	107	10	80 - 120
Sulfate	DUP	1907986-01	33.689	33.630		mg/L	0.2		10	
	MS	1907986-01	33.689	140.16	101.01	mg/L		105		80 - 120
	MSD	1907986-01	33.689	140.71	101.01	mg/L	0.4	106	10	80 - 120
<b>QC Batch ID: B041100</b>		Used client sample: N								
Ammonia as N	DUP	1906166-06	0.13220	0.13300		mg/L	0.6		10	J
	MS	1906166-06	0.13220	1.1054	1.0000	mg/L		97.3		90 - 110
	MSD	1906166-06	0.13220	1.2767	1.1111	mg/L	14.4	103	10	90 - 110 Q02

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 13:09  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q01 Sample precision is not within the control limits.
- Q02 Matrix spike precision is not within the control limits.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.







Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Correia Family Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1906591

Invoice ID: B334827

Enclosed are the results of analyses for samples received by the laboratory on 3/1/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1906591

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		4100 Atlas CL Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to:				Analysis Requested	
Expanded Constituent Suite				From Unfiltered Sample:	
Project: Dairy Representative Monitoring Program				Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3	
Site: Correla Family Dairy				From Filtered Sample:	
Samplers Name: Del Tech / Stacy Sells				Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	
Global ID - GADAIRY00012				From Filtered Sample:	
Ammonia-N, NO3-N, NO2-N					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl Pe Unpreserved
1	<del>COR-MW1s, COR-MW4d</del>	3-17-19	10:51	GW	x
2	<del>COR-MW2s, COR-MW2d</del>		12:19		x
3	<del>COR-MW3s, COR-MW3d</del>		12:46		x
4	<del>COR-MW4s, COR-MW4d</del>		11:21		x
5	<del>COR-MW5s, COR-MW5d</del>		11:46		x
6	Field Duplicate				x
7					x
8					x
9					x
10					x
11					x

  

CHK BY: [Signature]	DATE: 3-17-19	TIME: 16:45
DISTRIBUTION: [Signature]		
SUB OUT: [Signature]		

  

Relinquished by: (Signature) [Signature]	Date & Time: 3-17-19 16:45
Relinquished by: (Signature) [Signature]	Date & Time: 3-17-19 16:45
Relinquished by: (Signature) [Signature]	Date & Time: 3-17-19 22:00

  

**Comments:**

- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Luhdorff and Scalmani Consulting Engineers via email: llavagnino@lisce.com, rboyson@lisce.com, pdhalival@lisce.com, jlovells@lisce.com
- Send invoices to Jeanelle Lovells (jlovells@lisce.com).

(A) = Analysis (C) = Container (P) = Preservative

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# BC Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-06591

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received EYES  NO  Emissivity: 0.08 Container: PE Thermometer ID: 708 Date/Time: 3/1/200  
 Temperature: (A) 2.6 °C / (C) 2.9 °C Analyst Init: FK

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
49 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GSP Date/Time: 3/1/200

A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906591-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Correia Family	<b>Sampling Date:</b>	03/01/2019 10:51
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COR-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906591-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Correia Family	<b>Sampling Date:</b>	03/01/2019 12:19
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COR-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906591-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Correia Family	<b>Sampling Date:</b>	03/01/2019 12:46
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COR-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906591-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Correia Family	<b>Sampling Date:</b>	03/01/2019 11:21
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COR-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906591-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Correia Family	<b>Sampling Date:</b>	03/01/2019 11:46
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COR-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:55  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Correia Family Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906591-01	<b>Client Sample Name:</b> Correia Family, COR-MW1s, 3/1/2019 10:51:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	96	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	690	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.9	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	820	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	850	mg/L	5.0	0.67	EPA-300.0	4.4	A07	3
Nitrate as N	49	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	310	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2800	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.1	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.024	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.33	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/12/19 11:55	03/13/19 19:26	JRG	PE-OP2	1	B040231
2	SM-2320B	03/05/19 14:00	03/05/19 17:56	MEV	MET-1	2	B031786
3	EPA-300.0	03/02/19 12:00	03/02/19 14:42	SAV	IC5	10	B039133
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	20	B039606
5	EPA-351.2	03/14/19 20:30	03/18/19 17:34	JMH	SC-1	1	B040388
6	EPA-350.1	03/23/19 10:33	03/23/19 12:39	JMH	SC-1	1	B041206
7	EPA-353.2	03/01/19 23:51	03/01/19 23:57	TMS	KONE-1	1	B039504
8	EPA-365.4	03/14/19 20:30	03/19/19 10:29	JMH	SC-1	1	B040389

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Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906591-02	<b>Client Sample Name:</b> Correia Family, COR-MW2s, 3/1/2019 12:19:00PM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	84	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	210	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.0	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	400	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	350	mg/L	1.0	0.13	EPA-300.0	0.89	A07	4
Nitrate as N	11	mg/L	0.20	0.038	EPA-300.0	ND	A07	4
Sulfate	270	mg/L	2.0	0.28	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.85	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	0.97	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/12/19 12:00	03/13/19 19:34	JRG	PE-OP2	1	B040231
2	EPA-200.7	03/12/19 12:00	03/14/19 17:52	JRG	PE-OP2	1	B040231
3	SM-2320B	03/05/19 14:00	03/05/19 18:02	MEV	MET-1	2	B031786
4	EPA-300.0	03/02/19 12:00	03/02/19 17:05	SAV	IC5	2	B039133
5	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	10	B039606
6	EPA-351.2	03/14/19 20:30	03/18/19 17:35	JMH	SC-1	1	B040388
7	EPA-350.1	03/23/19 10:33	03/23/19 12:40	JMH	SC-1	1	B041206
8	EPA-353.2	03/01/19 23:51	03/01/19 23:57	TMS	KONE-1	1	B039504
9	EPA-365.4	03/14/19 20:30	03/19/19 10:29	JMH	SC-1	1	B040389

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Woodland, CA 95695

Reported: 03/26/2019 12:55  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Correia Family Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906591-03	<b>Client Sample Name:</b> Correia Family, COR-MW3s, 3/1/2019 12:46:00PM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	180	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	95	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	240	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.2	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	570	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	430	mg/L	2.5	0.34	EPA-300.0	2.2	A07	4
Nitrate as N	9.3	mg/L	0.20	0.038	EPA-300.0	ND	A07	5
Sulfate	290	mg/L	2.0	0.28	EPA-300.0	ND	A07	5
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		6
Total Kjeldahl Nitrogen	0.68	mg/L	0.20	0.036	EPA-351.2	ND		7
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		8
Nitrite as N	0.018	mg/L	0.050	0.010	EPA-353.2	ND	J	9
Total Phosphate	0.068	mg/L	0.15	0.050	EPA-365.4	ND	J	10

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/12/19 12:07	03/13/19 19:37	JRG	PE-OP2	1	B040231
2	EPA-200.7	03/12/19 12:07	03/14/19 17:54	JRG	PE-OP2	1	B040231
3	SM-2320B	03/05/19 14:00	03/05/19 18:10	MEV	MET-1	2	B031786
4	EPA-300.0	03/02/19 12:00	03/03/19 07:06	SAV	IC5	5	B039133
5	EPA-300.0	03/02/19 12:00	03/02/19 17:23	SAV	IC5	2	B039133
6	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	10	B039606
7	EPA-351.2	03/14/19 20:30	03/18/19 17:36	JMH	SC-1	1	B040388
8	EPA-350.1	03/23/19 10:33	03/23/19 12:41	JMH	SC-1	1	B041206
9	EPA-353.2	03/01/19 23:51	03/01/19 23:57	TMS	KONE-1	1	B039504
10	EPA-365.4	03/14/19 20:30	03/19/19 10:30	JMH	SC-1	1	B040389

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500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:55  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Correia Family Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906591-04	<b>Client Sample Name:</b> Correia Family, COR-MW4s, 3/1/2019 11:21:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	170	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	100	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	270	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.6	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	470	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	440	mg/L	2.5	0.34	EPA-300.0	2.2	A07	4
Nitrate as N	31	mg/L	0.20	0.038	EPA-300.0	ND	A07	5
Sulfate	310	mg/L	2.0	0.28	EPA-300.0	ND	A07	5
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		6
Total Kjeldahl Nitrogen	0.79	mg/L	0.20	0.036	EPA-351.2	0.068		7
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		8
Nitrite as N	0.12	mg/L	0.050	0.010	EPA-353.2	ND		9
Total Phosphate	0.091	mg/L	0.15	0.050	EPA-365.4	ND	J	10

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/12/19 12:10	03/13/19 19:40	JRG	PE-OP2	1	B040231
2	EPA-200.7	03/12/19 12:10	03/14/19 17:57	JRG	PE-OP2	1	B040231
3	SM-2320B	03/05/19 14:00	03/05/19 18:16	MEV	MET-1	2	B031786
4	EPA-300.0	03/02/19 12:00	03/03/19 06:49	SAV	IC5	5	B039133
5	EPA-300.0	03/02/19 12:00	03/02/19 15:00	SAV	IC5	2	B039133
6	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	10	B039606
7	EPA-351.2	03/14/19 20:30	03/18/19 17:59	JMH	SC-1	1	B040390
8	EPA-350.1	03/23/19 10:33	03/23/19 12:43	JMH	SC-1	1	B041206
9	EPA-353.2	03/01/19 23:51	03/01/19 23:57	TMS	KONE-1	1	B039504
10	EPA-365.4	03/14/19 20:30	03/19/19 10:09	JMH	SC-1	1	B040391

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906591-05	<b>Client Sample Name:</b> Correia Family, COR-MW5s, 3/1/2019 11:46:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	88	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	83	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	480	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	460	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	990	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	450	mg/L	2.5	0.34	EPA-300.0	2.2	A07	4
Nitrate as N	20	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	450	mg/L	5.0	0.70	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	3000	mg/L	200	100	SM-2540C	ND		5
Total Kjeldahl Nitrogen	16	mg/L	1.0	0.18	EPA-351.2	0.34	A07	6
Ammonia as N	0.45	mg/L	0.20	0.050	EPA-350.1	ND		7
Nitrite as N	4.8	mg/L	0.25	0.050	EPA-353.2	ND	A07	8
Total Phosphate	43	mg/L	3.0	1.0	EPA-365.4	ND	A07	9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/12/19 12:12	03/13/19 19:42	JRG	PE-OP2	1	B040231
2	EPA-200.7	03/12/19 12:12	03/14/19 18:00	JRG	PE-OP2	1	B040231
3	SM-2320B	03/05/19 14:00	03/05/19 18:22	MEV	MET-1	2	B031786
4	EPA-300.0	03/02/19 12:00	03/02/19 15:18	SAV	IC5	5	B039133
5	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	20	B039606
6	EPA-351.2	03/14/19 20:30	03/18/19 16:21	JMH	SC-1	5	B040390
7	EPA-350.1	03/23/19 10:33	03/23/19 12:45	JMH	SC-1	1	B041206
8	EPA-353.2	03/01/19 23:51	03/01/19 23:57	TMS	KONE-1	5	B039504
9	EPA-365.4	03/14/19 20:30	03/19/19 11:04	JMH	SC-1	20	B040391

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031786</b>						
Bicarbonate Alkalinity as CaCO3	B031786-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031786-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031786-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B039133</b>						
Chloride	B039133-BLK1	0.44500	mg/L	0.50	0.067	J
Nitrate as N	B039133-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B039133-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B039504</b>						
Nitrite as N	B039504-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039606</b>						
Total Dissolved Solids @ 180 C	B039606-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B040231</b>						
Dissolved Calcium	B040231-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B040231-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B040231-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B040231-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B040388</b>						
Total Kjeldahl Nitrogen	B040388-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040389</b>						
Total Phosphate	B040389-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040390</b>						
Total Kjeldahl Nitrogen	B040390-BLK1	0.067600	mg/L	0.20	0.036	J
<b>QC Batch ID: B040391</b>						
Total Phosphate	B040391-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B041206</b>						
Ammonia as N	B041206-BLK1	ND	mg/L	0.20	0.050	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	Control Limits		Lab
							RPD	Percent Recovery	
<b>QC Batch ID: B039133</b>									
Chloride	B039133-BS1	LCS	54.292	50.000	mg/L	109		90 - 110	
Nitrate as N	B039133-BS1	LCS	5.3530	5.0000	mg/L	107		90 - 110	
Sulfate	B039133-BS1	LCS	109.20	100.00	mg/L	109		90 - 110	
<b>QC Batch ID: B039504</b>									
Nitrite as N	B039504-BS1	LCS	0.51246	0.50000	mg/L	102		90 - 110	
<b>QC Batch ID: B039606</b>									
Total Dissolved Solids @ 180 C	B039606-BS1	LCS	610.00	586.00	mg/L	104		90 - 110	
<b>QC Batch ID: B040231</b>									
Dissolved Calcium	B040231-BS1	LCS	10.019	10.000	mg/L	100		85 - 115	
Dissolved Magnesium	B040231-BS1	LCS	9.7844	10.000	mg/L	97.8		85 - 115	
Dissolved Sodium	B040231-BS1	LCS	9.2703	10.000	mg/L	92.7		85 - 115	
Dissolved Potassium	B040231-BS1	LCS	9.2095	10.000	mg/L	92.1		85 - 115	
<b>QC Batch ID: B040388</b>									
Total Kjeldahl Nitrogen	B040388-BS1	LCS	1.9169	2.0000	mg/L	95.8		90 - 110	
<b>QC Batch ID: B040389</b>									
Total Phosphate	B040389-BS1	LCS	3.1330	3.0660	mg/L	102		85 - 115	
<b>QC Batch ID: B040390</b>									
Total Kjeldahl Nitrogen	B040390-BS1	LCS	2.1417	2.0000	mg/L	107		90 - 110	
<b>QC Batch ID: B040391</b>									
Total Phosphate	B040391-BS1	LCS	3.0490	3.0660	mg/L	99.4		85 - 115	
<b>QC Batch ID: B041206</b>									
Ammonia as N	B041206-BS1	LCS	0.97960	1.0000	mg/L	98.0		90 - 110	

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500 First Street
Woodland, CA 95695

Reported: 03/26/2019 12:55
Project: Dairy Rep MP - Expanded Suite
Project Number: Correia Family Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Qualls. Includes QC Batch IDs B031786, B039133, B039504, B039606, B040231, and B040388.

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B040389</b>		Used client sample: N								
Total Phosphate	DUP	1906512-02	8.9380	9.4224		mg/L	5.3		20	
	MS	1906512-02	8.9380	13.416	3.0660	mg/L		146		80 - 120 Q03
	MSD	1906512-02	8.9380	12.873	3.0660	mg/L	4.1	128	20	80 - 120 Q03
<b>QC Batch ID: B040390</b>		Used client sample: Y - Description: COR-MW4s, 03/01/2019 11:21								
Total Kjeldahl Nitrogen	DUP	1906591-04	0.78860	0.78960		mg/L	0.1		20	
	MS	1906591-04	0.78860	2.8627	2.0000	mg/L		104		90 - 110
	MSD	1906591-04	0.78860	2.8608	2.0000	mg/L	0.1	104	20	90 - 110
<b>QC Batch ID: B040391</b>		Used client sample: Y - Description: COR-MW4s, 03/01/2019 11:21								
Total Phosphate	DUP	1906591-04	0.091373	0.071442		mg/L	24.5		20	J
	MS	1906591-04	0.091373	3.3075	3.0660	mg/L		105		80 - 120
	MSD	1906591-04	0.091373	3.2333	3.0660	mg/L	2.3	102	20	80 - 120
<b>QC Batch ID: B041206</b>		Used client sample: N								
Ammonia as N	DUP	1906590-05	ND	ND		mg/L			10	
	MS	1906590-05	ND	1.1568	1.1111	mg/L		104		90 - 110
	MSD	1906590-05	ND	1.0992	1.1111	mg/L	5.1	98.9	10	90 - 110

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Frank J. Gomes Dairy#2

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1906592

Invoice ID: B334828

Enclosed are the results of analyses for samples received by the laboratory on 3/1/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1906592

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



<b>BC Laboratories, Inc.</b> 4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911				<b>Chain of Custody</b>			
<b>19-06592 Report to:</b> Expanded Constituent Suite							
<b>Name:</b> Luhdorff and Scalmanini		<b>Project:</b> Dairy Representative Monitoring Program		<b>Analysis Requested</b>			
<b>Address:</b> 500 First Street		<b>Site:</b> Frank J. Gomes Dairy #2		<b>From Filtered Sample:</b> Na, K, Mg, Ca, Cl, SO <sub>4</sub> (as SO <sub>4</sub> ), Total Dissolved Solids			
<b>City:</b> Woodland		<b>Samplers Name:</b> Del Teek / Steeg Lohle		<b>From Unfiltered Sample:</b> Total Kjeldahl Nitrogen, Total Phosphate (as PO <sub>4</sub> ), Alkalinity (HCO <sub>3</sub> , CO <sub>3</sub> & OH) as CaCO <sub>3</sub>			
<b>State:</b> CA		<b>Global ID - GADAIRY00013</b>					
<b>Altin:</b> Till Angermann							
<b>Lab #</b>	<b>Strike out non-sampled wells</b>	<b>Date Sampled</b>	<b>Time Sampled</b>	<b>Matrix</b>	<b>Cl Pe Unpreserved</b>		
1	FG2-MW1s, FGG-MW1d	3-1-19	904	GW	x		
2	FG2-MW2s, FGG-MW2d		823		x		
3	FG2-MW3s, FGG-MW3d		844		x		
4	FG2-MW4s, FGG-MW4d		929		x		
5	FG2-MW5s, FGG-MW5d		1000		x		
6	Field Duplicates				x		
7							
8							
9							
10							
11							
12							

  

<b>CHK BY:</b> [Signature] <b>DISTRIBUTION:</b> MA [Signature]	<b>SHEET HOLDING TIME:</b> Cl <sup>-</sup> NO <sub>3</sub> (NO) OP SS DO CL BOD MEAS COT
--	--

  

<b>Relinquished by: (Signature)</b> [Signature]	<b>Date &amp; Time</b> 3/1/19 16:40
<b>Relinquished by: (Signature)</b> [Signature]	<b>Date &amp; Time</b> 3/1/19 2200
<b>Relinquished by: (Signature)</b> [Signature]	<b>Date &amp; Time</b> [Blank]

  

**Comments:**

- Where indicated, samples shall be filtered (0.45um) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnine@lsce.com, (trysen@lsce.com, pthelwel@lsce.com, jlovelis@lsce.com)
- Send invoices to Jeanette Lovell (jlovelis@lsce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1  
 Submission #: 19-06592

SHIPPING INFORMATION  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

FREE LIQUID  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  
 YES  NO

Emissivity: 0.98 Container: PE Thermometer ID: Z08  
 Temperature: (A) 2.6 °C / (C) 2.4 °C Date/Time: 3/1/2010  
 Analyst Init: FLC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A					
4oz / Box / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / Box / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/013/0100										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLERVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: CSL Date/Time: 3/1/2010  
 A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Gomes Dairy#2  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906592-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Frank J. Gomes Dairy#2	<b>Sampling Date:</b>	03/01/2019 09:04
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG2-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906592-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Frank J. Gomes Dairy#2	<b>Sampling Date:</b>	03/01/2019 08:23
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG2-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906592-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Frank J. Gomes Dairy#2	<b>Sampling Date:</b>	03/01/2019 08:44
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG2-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906592-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Frank J. Gomes Dairy#2	<b>Sampling Date:</b>	03/01/2019 09:29
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG2-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906592-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Frank J. Gomes Dairy#2	<b>Sampling Date:</b>	03/01/2019 10:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG2-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Gomes Dairy#2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1906592-01		Client Sample Name: Frank J. Gomes Dairy#2, FG2-MW1s, 3/1/2019 9:04:00AM, Del Tech / Stacy Light						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	220	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	250	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	450	mg/L	0.50	0.051	EPA-200.7	0.059		1
Dissolved Potassium	1.7	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	480	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	360	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	ND	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	1700	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	3500	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.48	mg/L	0.20	0.036	EPA-351.2	0.068		5
Ammonia as N	0.057	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	ND	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/19/19 09:00	03/19/19 13:39	JRG	PE-OP2	1	B040775
2	SM-2320B	03/05/19 14:00	03/05/19 18:30	MEV	MET-1	2	B031786
3	EPA-300.0	03/01/19 18:00	03/02/19 19:30	SAV	IC1	5	B039128
4	SM-2540C	03/07/19 15:00	03/07/19 15:00	CAD	MANUAL	20	B039604
5	EPA-351.2	03/14/19 20:30	03/18/19 18:02	JMH	SC-1	1	B040390
6	EPA-350.1	03/23/19 10:33	03/23/19 12:45	JMH	SC-1	1	B041206
7	EPA-353.2	03/01/19 23:56	03/01/19 23:57	TMS	KONE-1	1	B039505
8	EPA-365.4	03/14/19 20:30	03/19/19 10:12	JMH	SC-1	1	B040391

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Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Gomes Dairy#2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906592-02	<b>Client Sample Name:</b> Frank J. Gomes Dairy#2, FG2-MW2s, 3/1/2019 8:23:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	170	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	290	mg/L	0.50	0.051	EPA-200.7	0.059		1
Dissolved Potassium	11	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	610	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	310	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	21	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	580	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.3	mg/L	0.20	0.036	EPA-351.2	0.068		5
Ammonia as N	0.067	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.060	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	1.5	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/19/19 09:00	03/19/19 13:42	JRG	PE-OP2	1	B040775
2	SM-2320B	03/05/19 14:00	03/05/19 18:36	MEV	MET-1	2	B031786
3	EPA-300.0	03/01/19 18:00	03/02/19 18:48	SAV	IC1	2	B039128
4	SM-2540C	03/07/19 15:00	03/07/19 15:00	CAD	MANUAL	10	B039604
5	EPA-351.2	03/14/19 20:30	03/18/19 18:04	JMH	SC-1	1	B040390
6	EPA-350.1	03/23/19 10:33	03/23/19 12:47	JMH	SC-1	1	B041206
7	EPA-353.2	03/01/19 23:56	03/02/19 00:01	TMS	KONE-1	1	B039505
8	EPA-365.4	03/14/19 20:30	03/19/19 10:14	JMH	SC-1	1	B040391

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**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Gomes Dairy#2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906592-03	<b>Client Sample Name:</b> Frank J. Gomes Dairy#2, FG2-MW3s, 3/1/2019 8:44:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	200	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	330	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	500	mg/L	0.50	0.051	EPA-200.7	0.059		1
Dissolved Potassium	40	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	680	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	540	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	11	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	1600	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	4100	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.7	mg/L	0.20	0.036	EPA-351.2	0.068		5
Ammonia as N	0.059	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.19	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	2.6	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/19/19 09:00	03/19/19 13:44	JRG	PE-OP2	1	B040775
2	SM-2320B	03/05/19 15:00	03/05/19 19:14	MEV	MET-1	2	B031787
3	EPA-300.0	03/01/19 18:00	03/02/19 19:09	SAV	IC1	5	B039128
4	SM-2540C	03/07/19 15:00	03/07/19 15:00	CAD	MANUAL	20	B039604
5	EPA-351.2	03/14/19 20:30	03/18/19 18:04	JMH	SC-1	1	B040390
6	EPA-350.1	03/23/19 10:33	03/23/19 12:47	JMH	SC-1	1	B041206
7	EPA-353.2	03/01/19 23:56	03/02/19 00:01	TMS	KONE-1	1	B039505
8	EPA-365.4	03/14/19 20:30	03/19/19 10:15	JMH	SC-1	1	B040391

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**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Gomes Dairy#2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906592-04	<b>Client Sample Name:</b> Frank J. Gomes Dairy#2, FG2-MW4s, 3/1/2019 9:29:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	150	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	410	mg/L	0.50	0.051	EPA-200.7	0.059		1
Dissolved Potassium	77	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	720	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	460	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	19	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	830	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2900	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	2.2	mg/L	0.20	0.036	EPA-351.2	0.068		5
Ammonia as N	0.066	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.26	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	3.7	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/19/19 09:00	03/19/19 13:47	JRG	PE-OP2	1	B040775
2	SM-2320B	03/05/19 15:00	03/05/19 19:20	MEV	MET-1	2	B031787
3	EPA-300.0	03/01/19 18:00	03/02/19 19:51	SAV	IC1	5	B039128
4	SM-2540C	03/07/19 15:00	03/07/19 15:00	CAD	MANUAL	10	B039604
5	EPA-351.2	03/14/19 20:30	03/18/19 16:00	JMH	SC-1	1	B040390
6	EPA-350.1	03/23/19 10:33	03/23/19 12:48	JMH	SC-1	1	B041206
7	EPA-353.2	03/01/19 23:56	03/02/19 00:01	TMS	KONE-1	1	B039505
8	EPA-365.4	03/14/19 20:30	03/19/19 10:15	JMH	SC-1	1	B040391

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**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Gomes Dairy#2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906592-05	<b>Client Sample Name:</b> Frank J. Gomes Dairy#2, FG2-MW5s, 3/1/2019 10:00:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	110	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	150	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	320	mg/L	0.50	0.051	EPA-200.7	0.059		1
Dissolved Potassium	1.2	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	680	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	320	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	4.5	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	620	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2100	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.70	mg/L	0.20	0.036	EPA-351.2	0.068		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.22	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.18	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/19/19 09:00	03/19/19 13:50	JRG	PE-OP2	1	B040775
2	SM-2320B	03/05/19 15:00	03/05/19 19:28	MEV	MET-1	2	B031787
3	EPA-300.0	03/01/19 18:00	03/02/19 20:12	SAV	IC1	5	B039128
4	SM-2540C	03/07/19 15:00	03/07/19 15:00	CAD	MANUAL	10	B039604
5	EPA-351.2	03/14/19 20:30	03/18/19 16:02	JMH	SC-1	1	B040390
6	EPA-350.1	03/23/19 10:34	03/23/19 12:18	JMH	SC-1	1	B041207
7	EPA-353.2	03/01/19 23:56	03/02/19 00:01	TMS	KONE-1	1	B039505
8	EPA-365.4	03/14/19 20:30	03/19/19 10:16	JMH	SC-1	1	B040391

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**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Gomes Dairy#2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031786</b>						
Bicarbonate Alkalinity as CaCO3	B031786-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031786-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031786-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031787</b>						
Bicarbonate Alkalinity as CaCO3	B031787-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031787-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031787-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B039128</b>						
Chloride	B039128-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B039128-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B039128-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B039505</b>						
Nitrite as N	B039505-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039604</b>						
Total Dissolved Solids @ 180 C	B039604-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B040390</b>						
<b>Total Kjeldahl Nitrogen</b>	<b>B040390-BLK1</b>	<b>0.067600</b>	<b>mg/L</b>	<b>0.20</b>	<b>0.036</b>	<b>J</b>
<b>QC Batch ID: B040391</b>						
Total Phosphate	B040391-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040775</b>						
Dissolved Calcium	B040775-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B040775-BLK1	ND	mg/L	0.050	0.019	
<b>Dissolved Sodium</b>	<b>B040775-BLK1</b>	<b>0.059273</b>	<b>mg/L</b>	<b>0.50</b>	<b>0.051</b>	<b>J</b>
Dissolved Potassium	B040775-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B041206</b>						
Ammonia as N	B041206-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B041207</b>						
Ammonia as N	B041207-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Gomes Dairy#2  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039128</b>										
Chloride	B039128-BS1	LCS	53.513	50.000	mg/L	107		90 - 110		
Nitrate as N	B039128-BS1	LCS	5.3750	5.0000	mg/L	108		90 - 110		
Sulfate	B039128-BS1	LCS	106.34	100.00	mg/L	106		90 - 110		
<b>QC Batch ID: B039505</b>										
Nitrite as N	B039505-BS1	LCS	0.49962	0.50000	mg/L	99.9		90 - 110		
<b>QC Batch ID: B039604</b>										
Total Dissolved Solids @ 180 C	B039604-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B040390</b>										
Total Kjeldahl Nitrogen	B040390-BS1	LCS	2.1417	2.0000	mg/L	107		90 - 110		
<b>QC Batch ID: B040391</b>										
Total Phosphate	B040391-BS1	LCS	3.0490	3.0660	mg/L	99.4		85 - 115		
<b>QC Batch ID: B040775</b>										
Dissolved Calcium	B040775-BS1	LCS	9.8395	10.000	mg/L	98.4		85 - 115		
Dissolved Magnesium	B040775-BS1	LCS	9.8928	10.000	mg/L	98.9		85 - 115		
Dissolved Sodium	B040775-BS1	LCS	9.1914	10.000	mg/L	91.9		85 - 115		
Dissolved Potassium	B040775-BS1	LCS	9.1204	10.000	mg/L	91.2		85 - 115		
<b>QC Batch ID: B041206</b>										
Ammonia as N	B041206-BS1	LCS	0.97960	1.0000	mg/L	98.0		90 - 110		
<b>QC Batch ID: B041207</b>										
Ammonia as N	B041207-BS1	LCS	0.96820	1.0000	mg/L	96.8		90 - 110		

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Reported: 03/26/2019 12:55
Project: Dairy Rep MP - Expanded Suite
Project Number: Frank J. Gomes Dairy#2
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes multiple QC batches (B031786, B031787, B039128, B039505, B039604, B040390, B040391, B040775) and various chemical tests like Bicarbonate Alkalinity, Chloride, Nitrate, Sulfate, etc.

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**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Gomes Dairy#2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B040775</b>		Used client sample: N								
Dissolved Magnesium	DUP	906595-05RE'	12.463	12.205		mg/L	2.1		20	
	MS	906595-05RE'	12.463	22.055	10.204	mg/L		94.0		85 - 115
	MSD	906595-05RE'	12.463	22.062	10.204	mg/L	0.0	94.1	20	85 - 115
Dissolved Sodium	DUP	906595-05RE'	37.793	36.873		mg/L	2.5		20	
	MS	906595-05RE'	37.793	47.661	10.204	mg/L		96.7		85 - 115
	MSD	906595-05RE'	37.793	47.408	10.204	mg/L	0.5	94.2	20	85 - 115
Dissolved Potassium	DUP	906595-05RE'	30.112	28.249		mg/L	6.4		20	
	MS	906595-05RE'	30.112	39.879	10.204	mg/L		95.7		85 - 115
	MSD	906595-05RE'	30.112	40.286	10.204	mg/L	1.0	99.7	20	85 - 115
<b>QC Batch ID: B041206</b>		Used client sample: N								
Ammonia as N	DUP	1906590-05	ND	ND		mg/L			10	
	MS	1906590-05	ND	1.1568	1.1111	mg/L		104		90 - 110
	MSD	1906590-05	ND	1.0992	1.1111	mg/L	5.1	98.9	10	90 - 110
<b>QC Batch ID: B041207</b>		Used client sample: Y - Description: FG2-MW5s, 03/01/2019 10:00								
Ammonia as N	DUP	1906592-05	ND	ND		mg/L			10	
	MS	1906592-05	ND	1.1168	1.1111	mg/L		101		90 - 110
	MSD	1906592-05	ND	1.1217	1.1111	mg/L	0.4	101	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:55  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Frank J. Gomes Dairy#2  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Godinho Dairy

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1906489

Invoice ID: B334797

Enclosed are the results of analyses for samples received by the laboratory on 2/28/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1906489

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



19-00489

Chain of Custody

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

BC Laboratories, Inc.

Report to:

Expanded Constituent Suite

Name: Luthorff and Scalmanini		Project: Dairy Representative Monitoring Program		From Filtered Sample: Na, K, Mg, Ca, Cl, SO <sub>4</sub> (as SO <sub>4</sub> ), Total Dissolved Solids		From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO <sub>4</sub> ), Alkalinity (HCO <sub>3</sub> , CO <sub>3</sub> & OH) as CaCO <sub>3</sub>	
Address: 500 First Street		Site: Goddihio Dairy		From Filtered Sample: Ammonia-N, NO <sub>3</sub> -N, NO <sub>2</sub> -N			
City: Woodland		Samplers Name: <i>Dee Tech / Steeg, Fryk</i>					
State: 95695		Global ID - GADAIRY00014					
Attn: Tili Angermann							
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qt Pp Unpreserved	Received By:	Date & Time
1	GOD-MW1s, <del>GOD-MW1d</del>	2-28-19	13:05	GW	x	<i>[Signature]</i>	2/28/19 15:55
2	GOD-MW2s, <del>GOD-MW2d</del>		14:19		x	<i>[Signature]</i>	2/28/19 22:30
3	GOD-MW3s, <del>GOD-MW3d</del>		15:56		x		
4	GOD-MW4s, <del>GOD-MW4d</del>		13:28		x		
5	GOD-MW5s, <del>GOD-MW5d</del>		15:38		x		
6	GOD-MW6s, <del>GOD-MW6d</del>		14:42		x		
7	GOD-MW7s, <del>GOD-MW7d</del>		15:04		x		
8	<del>Field Duplicate</del>				x		
9							
10							
11							
12							

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luthorff and Scalmanini Consulting Engineers via email: llavagnolo@lscce.com, rbyson@lscce.com, pdhall@lscce.com, jlovelis@lscce.com  
 4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 14-01078A

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/18/2013

Temperature: (A) 1.6 °C / (C) 1.9 °C Analyst Init: ENC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A			
4oz / 8oz / 16oz PE UNPRES										
2oz Cr*										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 545										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: \_\_\_\_\_ Date/Time: 2/11/13 0915

A = Actual / C = Corrected

Rev 21 05/23/2016



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:03  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906489-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Godinho Dairy	<b>Sampling Date:</b>	02/28/2019 13:05
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GOD-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906489-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Godinho Dairy	<b>Sampling Date:</b>	02/28/2019 14:19
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GOD-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906489-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Godinho Dairy	<b>Sampling Date:</b>	02/28/2019 13:56
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GOD-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906489-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Godinho Dairy	<b>Sampling Date:</b>	02/28/2019 13:28
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GOD-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906489-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Godinho Dairy	<b>Sampling Date:</b>	02/28/2019 15:32
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GOD-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:03  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906489-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Godinho Dairy	<b>Sampling Date:</b>	02/28/2019 14:42
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GOD-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906489-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Godinho Dairy	<b>Sampling Date:</b>	02/28/2019 15:04
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GOD-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:03  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Godinho Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906489-01	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW1s, 2/28/2019 1:05:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	72	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	76	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	420	mg/L	0.50	0.051	EPA-200.7	0.054		1
Dissolved Potassium	1.6	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	540	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	300	mg/L	1.0	0.13	EPA-300.0	ND	A07	4
Nitrate as N	6.7	mg/L	0.20	0.038	EPA-300.0	ND	A07	4
Sulfate	530	mg/L	2.0	0.28	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	1900	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.32	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.061	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.023	mg/L	0.050	0.010	EPA-353.2	ND	J	8
Total Phosphate	0.31	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 10:30	03/11/19 19:08	JRG	PE-OP2	1	B040001
2	EPA-200.7	03/11/19 10:30	03/13/19 16:53	JRG	PE-OP2	1	B040001
3	SM-2320B	03/04/19 14:00	03/04/19 16:23	MEV	MET-1	2	B031776
4	EPA-300.0	03/01/19 20:00	03/02/19 02:58	SAV	IC8	2	B039119
5	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	10	B039582
6	EPA-351.2	03/13/19 20:00	03/15/19 11:30	JMH	SC-1	1	B040237
7	EPA-350.1	03/23/19 12:00	03/26/19 08:16	JMH	SC-1	1	B041100
8	EPA-353.2	03/01/19 09:10	03/01/19 09:36	MC1	KONE-1	1	B039498
9	EPA-365.4	03/13/19 20:00	03/15/19 14:22	JMH	SC-1	1	B040238

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:03  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Godinho Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906489-02	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW2s, 2/28/2019 2:19:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	92	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	390	mg/L	0.50	0.051	EPA-200.7	0.054		1
Dissolved Potassium	1.7	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	470	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	420	mg/L	2.5	0.34	EPA-300.0	ND	A07	4
Nitrate as N	35	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	520	mg/L	5.0	0.70	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	2200	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.65	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.090	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.010	mg/L	0.050	0.010	EPA-353.2	ND	J	8
Total Phosphate	0.33	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 10:32	03/11/19 19:11	JRG	PE-OP2	1	B040001
2	EPA-200.7	03/11/19 10:32	03/13/19 16:56	JRG	PE-OP2	1	B040001
3	SM-2320B	03/04/19 14:00	03/04/19 16:28	MEV	MET-1	2	B031776
4	EPA-300.0	03/01/19 20:00	03/02/19 05:42	SAV	IC8	5	B039119
5	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	10	B039582
6	EPA-351.2	03/13/19 20:00	03/15/19 11:33	JMH	SC-1	1	B040237
7	EPA-350.1	03/23/19 12:00	03/26/19 08:16	JMH	SC-1	1	B041100
8	EPA-353.2	03/01/19 09:10	03/01/19 09:36	MC1	KONE-1	1	B039498
9	EPA-365.4	03/13/19 20:00	03/15/19 14:24	JMH	SC-1	1	B040238

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:03  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906489-03	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW3s, 2/28/2019 1:56:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	160	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	89	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	170	mg/L	0.50	0.051	EPA-200.7	0.054		1
Dissolved Potassium	2.4	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	390	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	230	mg/L	1.0	0.13	EPA-300.0	ND	A07	4
Nitrate as N	30	mg/L	0.20	0.038	EPA-300.0	ND	A07	4
Sulfate	320	mg/L	2.0	0.28	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.52	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.082	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.012	mg/L	0.050	0.010	EPA-353.2	ND	J	8
Total Phosphate	0.36	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 10:34	03/11/19 19:14	JRG	PE-OP2	1	B040001
2	EPA-200.7	03/11/19 10:34	03/13/19 16:58	JRG	PE-OP2	1	B040001
3	SM-2320B	03/04/19 14:00	03/04/19 16:34	MEV	MET-1	2	B031776
4	EPA-300.0	03/01/19 20:00	03/02/19 03:19	SAV	IC8	2	B039119
5	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	10	B039582
6	EPA-351.2	03/13/19 20:00	03/15/19 11:35	JMH	SC-1	1	B040237
7	EPA-350.1	03/23/19 11:00	03/26/19 08:20	JMH	SC-1	1	B041101
8	EPA-353.2	03/01/19 09:10	03/01/19 09:36	MC1	KONE-1	1	B039498
9	EPA-365.4	03/13/19 20:00	03/15/19 14:25	JMH	SC-1	1	B040238

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:03  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Godinho Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906489-04	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW4s, 2/28/2019 1:28:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	110	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	96	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	690	mg/L	0.50	0.051	EPA-200.7	0.054		1
Dissolved Potassium	2.8	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	970	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	470	mg/L	2.5	0.34	EPA-300.0	ND	A07	4
Nitrate as N	18	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	680	mg/L	5.0	0.70	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	2800	mg/L	200	100	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.79	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.094	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.017	mg/L	0.050	0.010	EPA-353.2	ND	J	8
Total Phosphate	0.43	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 10:38	03/11/19 19:35	JRG	PE-OP2	1	B040001
2	EPA-200.7	03/11/19 10:38	03/13/19 17:01	JRG	PE-OP2	1	B040001
3	SM-2320B	03/04/19 14:00	03/04/19 16:40	MEV	MET-1	2	B031776
4	EPA-300.0	03/01/19 20:00	03/02/19 05:22	SAV	IC8	5	B039119
5	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	20	B039582
6	EPA-351.2	03/13/19 20:00	03/15/19 11:35	JMH	SC-1	1	B040237
7	EPA-350.1	03/23/19 11:00	03/26/19 08:25	JMH	SC-1	1	B041101
8	EPA-353.2	03/01/19 09:10	03/01/19 09:36	MC1	KONE-1	1	B039498
9	EPA-365.4	03/13/19 20:00	03/15/19 14:27	JMH	SC-1	1	B040238

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:03  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906489-05	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW5s, 2/28/2019 3:32:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	120	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	210	mg/L	0.50	0.051	EPA-200.7	0.054		1
Dissolved Potassium	1.4	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	380	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	340	mg/L	1.0	0.13	EPA-300.0	ND	A07	4
Nitrate as N	12	mg/L	0.20	0.038	EPA-300.0	ND	A07	4
Sulfate	400	mg/L	2.0	0.28	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.42	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.058	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	0.19	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 10:40	03/11/19 19:38	JRG	PE-OP2	1	B040001
2	EPA-200.7	03/11/19 10:40	03/13/19 17:04	JRG	PE-OP2	1	B040001
3	SM-2320B	03/04/19 14:00	03/04/19 16:48	MEV	MET-1	2	B031776
4	EPA-300.0	03/01/19 20:00	03/02/19 07:04	SAV	IC8	2	B039119
5	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	10	B039582
6	EPA-351.2	03/13/19 20:00	03/15/19 11:36	JMH	SC-1	1	B040237
7	EPA-350.1	03/23/19 11:00	03/26/19 08:25	JMH	SC-1	1	B041101
8	EPA-353.2	03/01/19 09:10	03/01/19 09:36	MC1	KONE-1	1	B039498
9	EPA-365.4	03/13/19 20:00	03/15/19 14:28	JMH	SC-1	1	B040238

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:03  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Godinho Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906489-06	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW6s, 2/28/2019 2:42:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	120	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	130	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	570	mg/L	0.50	0.051	EPA-200.7	0.054		1
Dissolved Potassium	1.4	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	510	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	490	mg/L	2.5	0.34	EPA-300.0	ND	A07	4
Nitrate as N	44	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	800	mg/L	5.0	0.70	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	2800	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.92	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.11	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	0.48	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 10:42	03/11/19 19:40	JRG	PE-OP2	1	B040001
2	EPA-200.7	03/11/19 10:42	03/13/19 17:06	JRG	PE-OP2	1	B040001
3	SM-2320B	03/04/19 14:00	03/04/19 15:52	MEV	MET-1	2	B031776
4	EPA-300.0	03/01/19 20:00	03/02/19 06:03	SAV	IC8	5	B039119
5	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	10	B039582
6	EPA-351.2	03/13/19 20:00	03/15/19 11:39	JMH	SC-1	1	B040237
7	EPA-350.1	03/23/19 11:00	03/26/19 08:27	JMH	SC-1	1	B041101
8	EPA-353.2	03/01/19 09:10	03/01/19 09:36	MC1	KONE-1	1	B039498
9	EPA-365.4	03/13/19 20:00	03/15/19 14:28	JMH	SC-1	1	B040238

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:03  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906489-07	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW7s, 2/28/2019 3:04:00PM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	88	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	120	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	520	mg/L	0.50	0.051	EPA-200.7	0.054		1
Dissolved Potassium	1.4	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	800	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	400	mg/L	2.5	0.34	EPA-300.0	ND	A07	4
Nitrate as N	0.65	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	570	mg/L	5.0	0.70	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	2300	mg/L	100	50	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.77	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.10	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	0.026	mg/L	0.050	0.010	EPA-353.2	ND	J	8
Total Phosphate	0.43	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 10:45	03/11/19 19:43	JRG	PE-OP2	1	B040001
2	EPA-200.7	03/11/19 10:45	03/13/19 17:09	JRG	PE-OP2	1	B040001
3	SM-2320B	03/04/19 14:00	03/04/19 17:12	MEV	MET-1	2	B031777
4	EPA-300.0	03/01/19 20:00	03/02/19 07:25	SAV	IC8	5	B039119
5	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	10	B039582
6	EPA-351.2	03/13/19 20:00	03/15/19 11:40	JMH	SC-1	1	B040237
7	EPA-350.1	03/23/19 11:00	03/26/19 08:27	JMH	SC-1	1	B041101
8	EPA-353.2	03/01/19 09:10	03/01/19 09:36	MC1	KONE-1	1	B039498
9	EPA-365.4	03/13/19 20:00	03/15/19 14:29	JMH	SC-1	1	B040238

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Woodland, CA 95695

**Reported:** 03/26/2019 12:03  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031776</b>						
Bicarbonate Alkalinity as CaCO3	B031776-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031776-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031776-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031777</b>						
Bicarbonate Alkalinity as CaCO3	B031777-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031777-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031777-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B039119</b>						
Chloride	B039119-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B039119-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B039119-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B039498</b>						
Nitrite as N	B039498-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039582</b>						
Total Dissolved Solids @ 180 C	B039582-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B040001</b>						
Dissolved Calcium	B040001-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B040001-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B040001-BLK1	0.053805	mg/L	0.50	0.051	J
Dissolved Potassium	B040001-BLK2	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B040237</b>						
Total Kjeldahl Nitrogen	B040237-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040238</b>						
Total Phosphate	B040238-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B041100</b>						
Ammonia as N	B041100-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B041101</b>						
Ammonia as N	B041101-BLK1	ND	mg/L	0.20	0.050	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:03  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039119</b>										
Chloride	B039119-BS1	LCS	51.746	50.000	mg/L	103		90 - 110		
Nitrate as N	B039119-BS1	LCS	4.9790	5.0000	mg/L	99.6		90 - 110		
Sulfate	B039119-BS1	LCS	101.20	100.00	mg/L	101		90 - 110		
<b>QC Batch ID: B039498</b>										
Nitrite as N	B039498-BS1	LCS	0.50814	0.50000	mg/L	102		90 - 110		
<b>QC Batch ID: B039582</b>										
Total Dissolved Solids @ 180 C	B039582-BS1	LCS	565.00	586.00	mg/L	96.4		90 - 110		
<b>QC Batch ID: B040001</b>										
Dissolved Calcium	B040001-BS1	LCS	10.125	10.000	mg/L	101		85 - 115		
Dissolved Magnesium	B040001-BS1	LCS	10.231	10.000	mg/L	102		85 - 115		
Dissolved Sodium	B040001-BS1	LCS	9.3248	10.000	mg/L	93.2		85 - 115		
Dissolved Potassium	B040001-BS2	LCS	9.9717	10.000	mg/L	99.7		85 - 115		
<b>QC Batch ID: B040237</b>										
Total Kjeldahl Nitrogen	B040237-BS1	LCS	1.9336	2.0000	mg/L	96.7		90 - 110		
<b>QC Batch ID: B040238</b>										
Total Phosphate	B040238-BS1	LCS	3.1499	3.0660	mg/L	103		85 - 115		
<b>QC Batch ID: B041100</b>										
Ammonia as N	B041100-BS1	LCS	1.0462	1.1111	mg/L	94.2		90 - 110		
<b>QC Batch ID: B041101</b>										
Ammonia as N	B041101-BS1	LCS	0.93640	1.0000	mg/L	93.6		90 - 110		

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500 First Street
Woodland, CA 95695

Reported: 03/26/2019 12:03
Project: Dairy Rep MP - Expanded Suite
Project Number: Godinho Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC batches B031776, B031777, B039119, B039498, B039582, and B040001.

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:03  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B040237</b>		Used client sample: Y - Description: GOD-MW1s, 02/28/2019 13:05								
Total Kjeldahl Nitrogen	DUP	1906489-01	0.31870	0.30910		mg/L	3.1		20	
	MS	1906489-01	0.31870	2.2030	2.0000	mg/L		94.2		90 - 110
	MSD	1906489-01	0.31870	2.3644	2.0000	mg/L	7.1	102	20	90 - 110
<b>QC Batch ID: B040238</b>		Used client sample: Y - Description: GOD-MW1s, 02/28/2019 13:05								
Total Phosphate	DUP	1906489-01	0.30969	0.33820		mg/L	8.8		20	
	MS	1906489-01	0.30969	3.2275	3.0660	mg/L		95.2		80 - 120
	MSD	1906489-01	0.30969	3.3937	3.0660	mg/L	5.0	101	20	80 - 120
<b>QC Batch ID: B041100</b>		Used client sample: N								
Ammonia as N	DUP	1906166-06	0.13220	0.13300		mg/L	0.6		10	J
	MS	1906166-06	0.13220	1.1054	1.0000	mg/L		97.3		90 - 110
	MSD	1906166-06	0.13220	1.2767	1.1111	mg/L	14.4	103	10	90 - 110 Q02
<b>QC Batch ID: B041101</b>		Used client sample: Y - Description: GOD-MW3s, 02/28/2019 13:56								
Ammonia as N	DUP	1906489-03	0.082500	0.092900		mg/L	11.9		10	J,A02
	MS	1906489-03	0.082500	1.2147	1.1111	mg/L		102		90 - 110
	MSD	1906489-03	0.082500	1.1740	1.1111	mg/L	3.4	98.2	10	90 - 110

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:03  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q02 Matrix spike precision is not within the control limits.





Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: John Machado Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1906491  
Invoice ID: B334825

Enclosed are the results of analyses for samples received by the laboratory on 2/28/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1906491

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



19-06491

Chain of Custody

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

BC Laboratories, Inc.

Report to:				Analysis Requested			
Expanded Constituent Suite							
Project: Dairy Representative Monitoring Program							
Site: John Machado Dairy							
Samplers Name: Del Tech - Stacy High							
Global ID - GADAIRY00015							
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ct	Pe	Unpreserved
1	MAC-MW1s, <del>MAC-MW2s</del>	2-28-19	10:51	GW	x		x
2	MAC-MW2s, <del>MAC-MW3s</del>		10:34		x		x
3	MAC-MW3s, <del>MAC-MW4s</del>		10:43		x		x
4	MAC-MW4s, <del>MAC-MW5s</del>		11:45		x		x
5	MAC-MW5s, <del>MAC-MW6s</del>		11:18		x		x
6	Field Duplicate				x		x
7							
8							
9							
10							
11							
12							

  

From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Filtered Sample: Ammonia-N, NO3-N, NO2-N	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & CH) as CaCO3
--	---	---

  

Relinquished by: (Signature) <i>Stacy High</i>	Date & Time 2/28/19 15:55
Relinquished by: (Signature) <i>Guilford</i>	Date & Time 2/28/19 22:30
Relinquished by: (Signature)	Date & Time

  

SHOR-T HOLDING TIME  
Cr-6 NO. NO. OP SS  
DO Cl<sub>2</sub> BOD MBAS CO<sub>2</sub>

CHK BY: *STACY HIGH*  
SUB-OUT *GW*

Comments:

- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Luldhoff and Scalmani Consulting Engineers via email: lscalmani@lsce.com, rlryson@lsce.com, pdhall@lsce.com, jlovelis@lsce.com
- Send invoices to Jeanette Lovelis (jlovelis@lsce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-00041

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.98 Container: PE Thermometer ID: 209 Date/Time: 2/18/2016  
 Temperature: (A) 1.6 °C / (C) 1.9 °C Analyst Init: EPL

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: \_\_\_\_\_ Date/Time: 2/11/16 0815 Rev 21 05/23/2016  
 A = Actual / C = Corrected

IS:\WP\Decl\WordPerfect\LAB\_COCS\FORMS\SAMRECrev 201

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906491-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	John Macado Dairy	<b>Sampling Date:</b>	02/28/2019 10:51
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAC-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906491-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	John Macado Dairy	<b>Sampling Date:</b>	02/28/2019 10:34
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAC-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906491-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	John Macado Dairy	<b>Sampling Date:</b>	02/28/2019 12:13
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAC-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906491-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	John Macado Dairy	<b>Sampling Date:</b>	02/28/2019 11:45
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAC-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906491-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	John Macado Dairy	<b>Sampling Date:</b>	02/28/2019 11:18
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAC-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906491-01	<b>Client Sample Name:</b> John Macado Dairy, MAC-MW1s, 2/28/2019 10:51:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	180	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	92	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	370	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	3.1	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	680	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	350	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	27	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	410	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.0	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.065	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.12	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.52	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 11:10	03/11/19 19:56	JRG	PE-OP2	1	B040002
2	SM-2320B	03/04/19 14:00	03/04/19 18:08	MEV	MET-1	2	B031777
3	EPA-300.0	03/01/19 18:00	03/02/19 00:14	SAV	IC1	2	B039102
4	SM-2540C	03/07/19 15:00	03/07/19 15:00	CAD	MANUAL	10	B039604
5	EPA-351.2	03/13/19 21:30	03/15/19 12:38	JMH	SC-1	1	B040241
6	EPA-350.1	03/23/19 10:27	03/23/19 12:56	JMH	SC-1	1	B041205
7	EPA-353.2	03/01/19 09:51	03/01/19 09:55	MC1	KONE-1	1	B039499
8	EPA-365.4	03/13/19 21:30	03/15/19 15:23	JMH	SC-1	1	B040242

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Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906491-02	<b>Client Sample Name:</b> John Macado Dairy, MAC-MW2s, 2/28/2019 10:34:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	74	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	73	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	480	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	1.4	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	790	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	310	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	39	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	210	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.21	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.46	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 11:12	03/11/19 20:26	JRG	PE-OP2	1	B040002
2	SM-2320B	03/04/19 14:00	03/04/19 18:14	MEV	MET-1	2	B031777
3	EPA-300.0	03/01/19 18:00	03/02/19 00:35	SAV	IC1	2	B039102
4	SM-2540C	03/07/19 15:00	03/07/19 15:00	CAD	MANUAL	10	B039604
5	EPA-351.2	03/13/19 21:30	03/15/19 12:40	JMH	SC-1	1	B040241
6	EPA-350.1	03/23/19 10:27	03/23/19 12:57	JMH	SC-1	1	B041205
7	EPA-353.2	03/01/19 09:51	03/01/19 09:55	MC1	KONE-1	1	B039499
8	EPA-365.4	03/13/19 21:30	03/15/19 15:25	JMH	SC-1	1	B040242

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Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID:	1906491-03	Client Sample Name:	John Macado Dairy, MAC-MW3s, 2/28/2019 12:13:00PM, Del Tech / Stacy Light						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Dissolved Calcium	540	mg/L	0.20	0.032	EPA-200.7	ND	A07	1	
Dissolved Magnesium	330	mg/L	0.10	0.038	EPA-200.7	ND	A07	1	
Dissolved Sodium	1200	mg/L	1.0	0.10	EPA-200.7	0.25	A07	1	
Dissolved Potassium	7.5	mg/L	2.0	0.20	EPA-200.7	ND	A07	1	
Bicarbonate Alkalinity as CaCO3	390	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2	
Chloride	510	mg/L	2.5	0.34	EPA-300.0	ND	A07	3	
Nitrate as N	44	mg/L	0.50	0.095	EPA-300.0	ND	A07	3	
Sulfate	4600	mg/L	20	2.8	EPA-300.0	ND	A07	4	
Total Dissolved Solids @ 180 C	8000	mg/L	500	250	SM-2540C	ND		5	
Total Kjeldahl Nitrogen	1.1	mg/L	0.20	0.036	EPA-351.2	ND		6	
Ammonia as N	0.057	mg/L	0.20	0.050	EPA-350.1	ND	J	7	
Nitrite as N	0.19	mg/L	0.050	0.010	EPA-353.2	ND		8	
Total Phosphate	1.1	mg/L	0.15	0.050	EPA-365.4	ND		9	

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 11:15	03/12/19 13:54	JRG	PE-OP2	2	B040002
2	SM-2320B	03/04/19 14:00	03/04/19 18:20	MEV	MET-1	2	B031777
3	EPA-300.0	03/01/19 18:00	03/02/19 04:26	SAV	IC1	5	B039102
4	EPA-300.0	03/01/19 18:00	03/02/19 11:47	SAV	IC1	20	B039102
5	SM-2540C	03/07/19 15:00	03/07/19 15:00	CAD	MANUAL	50	B039604
6	EPA-351.2	03/13/19 21:30	03/15/19 12:40	JMH	SC-1	1	B040241
7	EPA-350.1	03/23/19 10:27	03/23/19 12:58	JMH	SC-1	1	B041205
8	EPA-353.2	03/01/19 09:51	03/01/19 09:55	MC1	KONE-1	1	B039499
9	EPA-365.4	03/13/19 21:30	03/15/19 15:25	JMH	SC-1	1	B040242

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1906491-04		Client Sample Name: John Macado Dairy, MAC-MW4s, 2/28/2019 11:45:00AM, Del Tech / Stacy Light						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	89	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	780	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	25	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	900	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	610	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	19	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	770	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	3300	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.1	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.058	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.020	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	1.3	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 11:17	03/11/19 20:31	JRG	PE-OP2	1	B040002
2	SM-2320B	03/04/19 15:00	03/04/19 18:56	MEV	MET-1	2	B031778
3	EPA-300.0	03/01/19 18:00	03/02/19 01:38	SAV	IC1	5	B039102
4	SM-2540C	03/07/19 15:00	03/07/19 15:00	CAD	MANUAL	20	B039604
5	EPA-351.2	03/13/19 21:30	03/15/19 12:42	JMH	SC-1	1	B040241
6	EPA-350.1	03/23/19 10:27	03/23/19 12:59	JMH	SC-1	1	B041205
7	EPA-353.2	03/01/19 09:51	03/01/19 09:55	MC1	KONE-1	1	B039499
8	EPA-365.4	03/13/19 21:30	03/15/19 15:26	JMH	SC-1	1	B040242

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906491-05	<b>Client Sample Name:</b> John Macado Dairy, MAC-MW5s, 2/28/2019 11:18:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	47	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	59	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	800	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	1.7	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	900	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	510	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	22	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	690	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	3100	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.86	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.056	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.63	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 11:20	03/11/19 20:34	JRG	PE-OP2	1	B040002
2	SM-2320B	03/04/19 15:00	03/04/19 19:04	MEV	MET-1	2	B031778
3	EPA-300.0	03/01/19 18:00	03/02/19 01:59	SAV	IC1	5	B039102
4	SM-2540C	03/07/19 15:00	03/07/19 15:00	CAD	MANUAL	20	B039604
5	EPA-351.2	03/13/19 21:30	03/15/19 12:42	JMH	SC-1	1	B040241
6	EPA-350.1	03/23/19 10:27	03/23/19 13:00	JMH	SC-1	1	B041205
7	EPA-353.2	03/01/19 09:51	03/01/19 09:55	MC1	KONE-1	1	B039499
8	EPA-365.4	03/13/19 21:30	03/15/19 15:27	JMH	SC-1	1	B040242

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Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031777</b>						
Bicarbonate Alkalinity as CaCO3	B031777-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031777-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031777-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031778</b>						
Bicarbonate Alkalinity as CaCO3	B031778-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031778-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031778-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B039102</b>						
Chloride	B039102-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B039102-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B039102-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B039499</b>						
Nitrite as N	B039499-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039604</b>						
Total Dissolved Solids @ 180 C	B039604-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B040002</b>						
Dissolved Calcium	B040002-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B040002-BLK1	ND	mg/L	0.050	0.019	
<b>Dissolved Sodium</b>	<b>B040002-BLK1</b>	<b>0.12289</b>	<b>mg/L</b>	<b>0.50</b>	<b>0.051</b>	<b>J</b>
Dissolved Potassium	B040002-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B040241</b>						
Total Kjeldahl Nitrogen	B040241-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040242</b>						
Total Phosphate	B040242-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B041205</b>						
Ammonia as N	B041205-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039102</b>										
Chloride	B039102-BS1	LCS	52.170	50.000	mg/L	104		90 - 110		
Nitrate as N	B039102-BS1	LCS	5.2290	5.0000	mg/L	105		90 - 110		
Sulfate	B039102-BS1	LCS	103.28	100.00	mg/L	103		90 - 110		
<b>QC Batch ID: B039499</b>										
Nitrite as N	B039499-BS1	LCS	0.49639	0.50000	mg/L	99.3		90 - 110		
<b>QC Batch ID: B039604</b>										
Total Dissolved Solids @ 180 C	B039604-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B040002</b>										
Dissolved Calcium	B040002-BS1	LCS	10.341	10.000	mg/L	103		85 - 115		
Dissolved Magnesium	B040002-BS1	LCS	10.237	10.000	mg/L	102		85 - 115		
Dissolved Sodium	B040002-BS1	LCS	9.6057	10.000	mg/L	96.1		85 - 115		
Dissolved Potassium	B040002-BS1	LCS	9.3359	10.000	mg/L	93.4		85 - 115		
<b>QC Batch ID: B040241</b>										
Total Kjeldahl Nitrogen	B040241-BS1	LCS	2.0164	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B040242</b>										
Total Phosphate	B040242-BS1	LCS	3.0202	3.0660	mg/L	98.5		85 - 115		
<b>QC Batch ID: B041205</b>										
Ammonia as N	B041205-BS1	LCS	0.97610	1.0000	mg/L	97.6		90 - 110		

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Woodland, CA 95695

Reported: 03/26/2019 12:54
Project: Dairy Rep MP - Expanded Suite
Project Number: John Machado Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC batches B031777, B031778, B039102, B039499, B039604, and B040002.

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B040241</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1906490-04	5.9097	6.0710		mg/L	2.7		20	
	MS	1906490-04	5.9097	8.0722	2.0000	mg/L		108		90 - 110
	MSD	1906490-04	5.9097	8.0373	2.0000	mg/L	0.4	106	20	90 - 110
<b>QC Batch ID: B040242</b>		Used client sample: N								
Total Phosphate	DUP	1906490-04	3.0027	3.0457		mg/L	1.4		20	
	MS	1906490-04	3.0027	6.0582	3.0660	mg/L		99.7		80 - 120
	MSD	1906490-04	3.0027	5.9996	3.0660	mg/L	1.0	97.7	20	80 - 120
<b>QC Batch ID: B041205</b>		Used client sample: N								
Ammonia as N	DUP	1906490-06	0.074600	0.069400		mg/L	7.2		10	J
	MS	1906490-06	0.074600	1.1696	1.1111	mg/L		98.5		90 - 110
	MSD	1906490-06	0.074600	1.1851	1.1111	mg/L	1.3	99.9	10	90 - 110

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Jose Nunes Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1906490  
Invoice ID: B334798

Enclosed are the results of analyses for samples received by the laboratory on 2/28/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1906490

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



19-06490

Chain of Custody

4100 Atlas CL  
Bakersfield, CA 93308  
(661) 327-4911

BC Laboratories, Inc.

Report to:

Expanded Constituent Suite

Project: Dairy Representative Monitoring Program

Site: Jose Nunes Dairy 1 Q 2019

Samplers Name: Del Tech Steery Light  
Global ID - GADDAIRY00016

Analysis Requested

From Filtered Sample:  
Na, K, Mg, Ca, Cl,  
SO4 (as SO4),  
Total Dissolved Solids

From Filtered Sample:  
Ammonia-N, NO3-N,  
NO2-N

From Filtered Sample:  
Ammonia-N, NO3-N,  
NO2-N

From Unfiltered Sample:  
Total Kjeldahl Nitrogen,  
Total Phosphate (as PO4),  
Alkalinity (HCO3, CO3 & OH) as  
CaCO3

Name: Luhdorff and Scalmani

Address: 500 First Street

City: Woodland

State: 95695

CA

Attn: Till Angermann

Global ID - GADDAIRY00016

Time Sampled

Date Sampled

Matrix

Q1 P6

Unpreserved

Strike out non-sampled wells

1 NUN-MW1s, NUN-MW1d

2 NUN-MW2s, NUN-MW2d

3 NUN-MW3s, NUN-MW3d

4 NUN-MW4s, NUN-MW4d

5 NUN-MW5s, NUN-MW5d

6 Field Duplicate #8

7

8

9

10

11

12

CHK BY DISTRIBUTION  
SUB-OUT

Relinquished by: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature)

Comments:

- 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- 2) Lab reports shall identify sampled wells exactly as shown on this CoC.
- 3) Send lab reports to Luhdorff and Scalmani Consulting Engineers via email: llavagnino@lscce.com, rlryson@lscce.com, pthallwell@lscce.com, jlovelis@lscce.com
- 4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).

Received By: (Signature)

Date & Time

Received By: (Signature)

Date & Time

Received By: (Signature)

Date & Time

(A)= Analysis (C)= Container (P)= Preservative





BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-06490

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

**COC Received**  
 YES  NO

Emissivity: 0.98 Container: PE Thermometer ID: 209 Date/Time: 2/18/2016  
 Temperature: (A) 1.6 °C / (C) 1.9 °C Analyst Init: EM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A				
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: [Signature] Date/Time: 2/1/16 0915 Rev 21 05/23/2016  
 A = Actual / C = Corrected

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:06  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906490-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	02/28/2019 09:16
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	NUN-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906490-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	02/28/2019 08:31
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	NUN-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906490-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	02/28/2019 09:33
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	NUN-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906490-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	02/28/2019 10:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	NUN-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906490-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	02/28/2019 08:49
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	NUN-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:06  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906490-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/28/2019 22:30
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	02/28/2019 00:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate #8	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:06  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Jose Nunes Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906490-01	<b>Client Sample Name:</b> Jose Nunes Dairy, NUN-MW1s, 2/28/2019 9:16:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	110	mg/L	0.20	0.032	EPA-200.7	ND	A07	1
Dissolved Magnesium	150	mg/L	0.10	0.038	EPA-200.7	ND	A07	1
Dissolved Sodium	1100	mg/L	1.0	0.10	EPA-200.7	ND	A07	1
Dissolved Potassium	7.6	mg/L	2.0	0.20	EPA-200.7	ND	A07	1
Bicarbonate Alkalinity as CaCO3	770	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	710	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	2.9	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	1600	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	4400	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.84	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.11	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.022	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.60	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/18/19 10:48	03/18/19 14:55	JCC	PE-OP2	2	B040593
2	SM-2320B	03/04/19 14:00	03/04/19 17:26	MEV	MET-1	2	B031777
3	EPA-300.0	03/01/19 20:00	03/01/19 23:33	TMS	IC8	5	B039121
4	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	20	B039583
5	EPA-351.2	03/13/19 20:00	03/15/19 11:40	JMH	SC-1	1	B040237
6	EPA-350.1	03/23/19 11:00	03/26/19 08:29	JMH	SC-1	1	B041101
7	EPA-353.2	03/01/19 09:10	03/01/19 09:36	MC1	KONE-1	1	B039498
8	EPA-365.4	03/13/19 20:00	03/15/19 14:29	JMH	SC-1	1	B040238

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:06  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Jose Nunes Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906490-02	<b>Client Sample Name:</b> Jose Nunes Dairy, NUN-MW2s, 2/28/2019 8:31:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	140	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	140	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	460	mg/L	0.50	0.051	EPA-200.7	0.054		1
Dissolved Potassium	1.3	mg/L	1.0	0.10	EPA-200.7	ND		2
Bicarbonate Alkalinity as CaCO3	490	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	3
Chloride	350	mg/L	1.0	0.13	EPA-300.0	ND	A07	4
Nitrate as N	5.5	mg/L	0.20	0.038	EPA-300.0	ND	A07	4
Sulfate	1000	mg/L	5.0	0.70	EPA-300.0	ND	A07	5
Total Dissolved Solids @ 180 C	2600	mg/L	100	50	SM-2540C	ND		6
Total Kjeldahl Nitrogen	0.80	mg/L	0.20	0.036	EPA-351.2	ND		7
Ammonia as N	0.12	mg/L	0.20	0.050	EPA-350.1	ND	J	8
Nitrite as N	0.015	mg/L	0.050	0.010	EPA-353.2	ND	J	9
Total Phosphate	0.26	mg/L	0.15	0.050	EPA-365.4	ND		10

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 10:50	03/11/19 19:06	JRG	PE-OP2	1	B040001
2	EPA-200.7	03/11/19 10:50	03/13/19 16:50	JRG	PE-OP2	1	B040001
3	SM-2320B	03/04/19 14:00	03/04/19 17:33	MEV	MET-1	2	B031777
4	EPA-300.0	03/01/19 20:00	03/01/19 21:30	TMS	IC8	2	B039121
5	EPA-300.0	03/01/19 20:00	03/02/19 09:48	SAV	IC8	5	B039121
6	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	10	B039583
7	EPA-351.2	03/13/19 20:00	03/15/19 11:42	JMH	SC-1	1	B040237
8	EPA-350.1	03/23/19 11:00	03/26/19 08:29	JMH	SC-1	1	B041101
9	EPA-353.2	03/01/19 09:51	03/01/19 09:51	MC1	KONE-1	1	B039499
10	EPA-365.4	03/13/19 20:00	03/15/19 14:30	JMH	SC-1	1	B040238

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:06  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906490-03	<b>Client Sample Name:</b> Jose Nunes Dairy, NUN-MW3s, 2/28/2019 9:33:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	220	mg/L	0.20	0.032	EPA-200.7	ND	A07	1
Dissolved Magnesium	130	mg/L	0.10	0.038	EPA-200.7	ND	A07	1
Dissolved Sodium	1200	mg/L	1.0	0.10	EPA-200.7	0.25	A07	1
Dissolved Potassium	1.3	mg/L	2.0	0.20	EPA-200.7	ND	J,A07	1
Bicarbonate Alkalinity as CaCO3	710	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	880	mg/L	5.0	0.67	EPA-300.0	ND	A07	3
Nitrate as N	12	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	1800	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	4900	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.2	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.15	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.045	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.23	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 10:55	03/12/19 13:44	JRG	PE-OP2	2	B040002
2	SM-2320B	03/04/19 14:00	03/04/19 17:38	MEV	MET-1	2	B031777
3	EPA-300.0	03/01/19 20:00	03/01/19 23:53	SAV	IC8	10	B039121
4	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	20	B039583
5	EPA-351.2	03/13/19 21:30	03/15/19 12:34	JMH	SC-1	1	B040241
6	EPA-350.1	03/23/19 11:00	03/26/19 08:30	JMH	SC-1	1	B041101
7	EPA-353.2	03/01/19 09:51	03/01/19 09:51	MC1	KONE-1	1	B039499
8	EPA-365.4	03/13/19 21:30	03/15/19 15:21	JMH	SC-1	1	B040242

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**Reported:** 03/26/2019 12:06  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906490-04	<b>Client Sample Name:</b> Jose Nunes Dairy, NUN-MW4s, 2/28/2019 10:00:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	400	mg/L	0.50	0.080	EPA-200.7	ND	A07	1
Dissolved Magnesium	300	mg/L	0.25	0.095	EPA-200.7	ND	A07	1
Dissolved Sodium	2400	mg/L	2.5	0.26	EPA-200.7	0.61	A07	1
Dissolved Potassium	21	mg/L	5.0	0.50	EPA-200.7	ND	A07	1
Bicarbonate Alkalinity as CaCO3	610	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	890	mg/L	5.0	0.67	EPA-300.0	ND	A07	3
Nitrate as N	1.4	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	5800	mg/L	20	2.8	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	11000	mg/L	500	250	SM-2540C	ND		5
Total Kjeldahl Nitrogen	5.9	mg/L	1.0	0.18	EPA-351.2	ND	A07	6
Ammonia as N	3.4	mg/L	1.0	0.25	EPA-350.1	ND	A07	7
Nitrite as N	0.020	mg/L	0.050	0.010	EPA-353.2	ND	J	8
Total Phosphate	3.0	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 11:00	03/12/19 13:46	JRG	PE-OP2	5	B040002
2	SM-2320B	03/04/19 14:00	03/04/19 17:45	MEV	MET-1	2	B031777
3	EPA-300.0	03/01/19 20:00	03/02/19 01:56	SAV	IC8	10	B039121
4	EPA-300.0	03/01/19 20:00	03/02/19 11:10	SAV	IC8	20	B039121
5	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	50	B039583
6	EPA-351.2	03/13/19 21:30	03/15/19 12:59	JMH	SC-1	5	B040241
7	EPA-350.1	03/23/19 11:00	03/26/19 08:48	JMH	SC-1	5	B041101
8	EPA-353.2	03/01/19 09:51	03/01/19 09:51	MC1	KONE-1	1	B039499
9	EPA-365.4	03/13/19 21:30	03/15/19 15:19	JMH	SC-1	1	B040242

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Reported: 03/26/2019 12:06  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Jose Nunes Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906490-05	<b>Client Sample Name:</b> Jose Nunes Dairy, NUN-MW5s, 2/28/2019 8:49:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	240	mg/L	0.20	0.032	EPA-200.7	ND	A07	1
Dissolved Magnesium	260	mg/L	0.10	0.038	EPA-200.7	ND	A07	1
Dissolved Sodium	1400	mg/L	1.0	0.10	EPA-200.7	0.25	A07	1
Dissolved Potassium	1.9	mg/L	2.0	0.20	EPA-200.7	ND	J,A07	1
Bicarbonate Alkalinity as CaCO3	700	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	670	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	ND	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	3400	mg/L	10	1.4	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	7200	mg/L	500	250	SM-2540C	ND		5
Total Kjeldahl Nitrogen	0.51	mg/L	0.20	0.036	EPA-351.2	ND		6
Ammonia as N	0.090	mg/L	0.20	0.050	EPA-350.1	ND	J	7
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	0.23	mg/L	0.15	0.050	EPA-365.4	ND		9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 11:02	03/12/19 13:49	JRG	PE-OP2	2	B040002
2	SM-2320B	03/04/19 14:00	03/04/19 17:53	MEV	MET-1	2	B031777
3	EPA-300.0	03/01/19 20:00	03/01/19 21:50	TMS	IC8	5	B039121
4	EPA-300.0	03/01/19 20:00	03/02/19 10:09	SAV	IC8	10	B039121
5	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	50	B039583
6	EPA-351.2	03/13/19 21:30	03/15/19 12:37	JMH	SC-1	1	B040241
7	EPA-350.1	03/23/19 11:00	03/26/19 08:34	JMH	SC-1	1	B041101
8	EPA-353.2	03/01/19 09:51	03/01/19 09:51	MC1	KONE-1	1	B039499
9	EPA-365.4	03/13/19 21:30	03/15/19 15:22	JMH	SC-1	1	B040242

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**Reported:** 03/26/2019 12:06  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906490-06	<b>Client Sample Name:</b> Jose Nunes Dairy, Field Duplicate #8, 2/28/2019 12:00:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	220	mg/L	0.20	0.032	EPA-200.7	ND	A07	1
Dissolved Magnesium	130	mg/L	0.10	0.038	EPA-200.7	ND	A07	1
Dissolved Sodium	1200	mg/L	1.0	0.10	EPA-200.7	0.25	A07	1
Dissolved Potassium	1.4	mg/L	2.0	0.20	EPA-200.7	ND	J,A07	1
Bicarbonate Alkalinity as CaCO3	700	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	870	mg/L	2.5	0.34	EPA-300.0	ND	A07	3
Nitrate as N	13	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	1800	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	4800	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	1.1	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.075	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.034	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.19	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/11/19 11:05	03/12/19 13:52	JRG	PE-OP2	2	B040002
2	SM-2320B	03/04/19 14:00	03/04/19 17:59	MEV	MET-1	2	B031777
3	EPA-300.0	03/01/19 20:00	03/02/19 08:26	SAV	IC8	5	B039121
4	SM-2540C	03/07/19 13:00	03/07/19 13:00	CAD	MANUAL	20	B039583
5	EPA-351.2	03/13/19 21:30	03/15/19 12:38	JMH	SC-1	1	B040241
6	EPA-350.1	03/23/19 10:27	03/23/19 12:51	JMH	SC-1	1	B041205
7	EPA-353.2	03/01/19 09:51	03/01/19 09:51	MC1	KONE-1	1	B039499
8	EPA-365.4	03/13/19 21:30	03/15/19 15:22	JMH	SC-1	1	B040242

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**Reported:** 03/26/2019 12:06  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031777</b>						
Bicarbonate Alkalinity as CaCO3	B031777-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031777-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031777-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B039121</b>						
Chloride	B039121-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B039121-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B039121-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B039498</b>						
Nitrite as N	B039498-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039499</b>						
Nitrite as N	B039499-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039583</b>						
Total Dissolved Solids @ 180 C	B039583-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B040001</b>						
Dissolved Calcium	B040001-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B040001-BLK1	ND	mg/L	0.050	0.019	
<b>Dissolved Sodium</b>	<b>B040001-BLK1</b>	<b>0.053805</b>	<b>mg/L</b>	<b>0.50</b>	<b>0.051</b>	<b>J</b>
Dissolved Potassium	B040001-BLK2	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B040002</b>						
Dissolved Calcium	B040002-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B040002-BLK1	ND	mg/L	0.050	0.019	
<b>Dissolved Sodium</b>	<b>B040002-BLK1</b>	<b>0.12289</b>	<b>mg/L</b>	<b>0.50</b>	<b>0.051</b>	<b>J</b>
Dissolved Potassium	B040002-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B040237</b>						
Total Kjeldahl Nitrogen	B040237-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040238</b>						
Total Phosphate	B040238-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040241</b>						
Total Kjeldahl Nitrogen	B040241-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040242</b>						

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**Reported:** 03/26/2019 12:06  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B040242</b>						
Total Phosphate	B040242-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040593</b>						
Dissolved Calcium	B040593-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B040593-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B040593-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B040593-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B041101</b>						
Ammonia as N	B041101-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B041205</b>						
Ammonia as N	B041205-BLK1	ND	mg/L	0.20	0.050	

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**Reported:** 03/26/2019 12:06  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039121</b>										
Chloride	B039121-BS1	LCS	51.792	50.000	mg/L	104		90 - 110		
Nitrate as N	B039121-BS1	LCS	5.1430	5.0000	mg/L	103		90 - 110		
Sulfate	B039121-BS1	LCS	101.32	100.00	mg/L	101		90 - 110		
<b>QC Batch ID: B039498</b>										
Nitrite as N	B039498-BS1	LCS	0.50814	0.50000	mg/L	102		90 - 110		
<b>QC Batch ID: B039499</b>										
Nitrite as N	B039499-BS1	LCS	0.49639	0.50000	mg/L	99.3		90 - 110		
<b>QC Batch ID: B039583</b>										
Total Dissolved Solids @ 180 C	B039583-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B040001</b>										
Dissolved Calcium	B040001-BS1	LCS	10.125	10.000	mg/L	101		85 - 115		
Dissolved Magnesium	B040001-BS1	LCS	10.231	10.000	mg/L	102		85 - 115		
Dissolved Sodium	B040001-BS1	LCS	9.3248	10.000	mg/L	93.2		85 - 115		
Dissolved Potassium	B040001-BS2	LCS	9.9717	10.000	mg/L	99.7		85 - 115		
<b>QC Batch ID: B040002</b>										
Dissolved Calcium	B040002-BS1	LCS	10.341	10.000	mg/L	103		85 - 115		
Dissolved Magnesium	B040002-BS1	LCS	10.237	10.000	mg/L	102		85 - 115		
Dissolved Sodium	B040002-BS1	LCS	9.6057	10.000	mg/L	96.1		85 - 115		
Dissolved Potassium	B040002-BS1	LCS	9.3359	10.000	mg/L	93.4		85 - 115		
<b>QC Batch ID: B040237</b>										
Total Kjeldahl Nitrogen	B040237-BS1	LCS	1.9336	2.0000	mg/L	96.7		90 - 110		
<b>QC Batch ID: B040238</b>										
Total Phosphate	B040238-BS1	LCS	3.1499	3.0660	mg/L	103		85 - 115		
<b>QC Batch ID: B040241</b>										
Total Kjeldahl Nitrogen	B040241-BS1	LCS	2.0164	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B040242</b>										
Total Phosphate	B040242-BS1	LCS	3.0202	3.0660	mg/L	98.5		85 - 115		
<b>QC Batch ID: B040593</b>										
Dissolved Calcium	B040593-BS1	LCS	10.569	10.000	mg/L	106		85 - 115		
Dissolved Magnesium	B040593-BS1	LCS	10.419	10.000	mg/L	104		85 - 115		
Dissolved Sodium	B040593-BS1	LCS	9.7905	10.000	mg/L	97.9		85 - 115		
Dissolved Potassium	B040593-BS1	LCS	9.4128	10.000	mg/L	94.1		85 - 115		

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**Reported:** 03/26/2019 12:06  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Jose Nunes Dairy  
Project Manager: Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B041101</b>										
Ammonia as N	B041101-BS1	LCS	0.93640	1.0000	mg/L	93.6		90 - 110		
<b>QC Batch ID: B041205</b>										
Ammonia as N	B041205-BS1	LCS	0.97610	1.0000	mg/L	97.6		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:06  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Jose Nunes Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B031777</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1906489-07	796.26	797.48		mg/L	0.2		10	
Carbonate Alkalinity as CaCO3	DUP	1906489-07	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1906489-07	ND	ND		mg/L			10	
<b>QC Batch ID: B039121</b>		Used client sample: N								
Chloride	DUP	1906394-01	57.051	56.273		mg/L	1.4		10	
	MS	1906394-01	57.051	110.82	50.505	mg/L		106		80 - 120
	MSD	1906394-01	57.051	110.77	50.505	mg/L	0.0	106	10	80 - 120
Nitrate as N	DUP	1906394-01	3.8400	3.9240		mg/L	2.2		10	
	MS	1906394-01	3.8400	9.1596	5.0505	mg/L		105		80 - 120
	MSD	1906394-01	3.8400	9.1616	5.0505	mg/L	0.0	105	10	80 - 120
Sulfate	DUP	1906394-01	62.303	62.577		mg/L	0.4		10	
	MS	1906394-01	62.303	172.36	101.01	mg/L		109		80 - 120
	MSD	1906394-01	62.303	172.41	101.01	mg/L	0.0	109	10	80 - 120
<b>QC Batch ID: B039498</b>		Used client sample: N								
Nitrite as N	DUP	1906482-01	ND	ND		mg/L			10	
	MS	1906482-01	ND	0.53690	0.52632	mg/L		102		90 - 110
	MSD	1906482-01	ND	0.54521	0.52632	mg/L	1.5	104	10	90 - 110
<b>QC Batch ID: B039499</b>		Used client sample: Y - Description: NUN-MW2s, 02/28/2019 08:31								
Nitrite as N	DUP	1906490-02	0.014744	0.025757		mg/L	54.4		10	J,A02
	MS	1906490-02	0.014744	0.54585	0.52632	mg/L		101		90 - 110
	MSD	1906490-02	0.014744	0.57115	0.52632	mg/L	4.5	106	10	90 - 110
<b>QC Batch ID: B039583</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1906490-01	4440.0	4520.0		mg/L	1.8		10	
<b>QC Batch ID: B040001</b>		Used client sample: Y - Description: NUN-MW1s, 02/28/2019 09:16								
Dissolved Calcium	DUP	1906490-01	98.919	99.932		mg/L	1.0		20	
	MS	1906490-01	98.919	109.15	10.204	mg/L		100		85 - 115
	MSD	1906490-01	98.919	110.39	10.204	mg/L	1.1	112	20	85 - 115
Dissolved Magnesium	DUP	1906490-01	135.67	137.31		mg/L	1.2		20	
	MS	1906490-01	135.67	147.08	10.204	mg/L		112		85 - 115
	MSD	1906490-01	135.67	148.71	10.204	mg/L	1.1	128	20	85 - 115 A03
Dissolved Sodium	DUP	1906490-01	956.03	984.60		mg/L	2.9		20	
	MS	1906490-01	956.03	976.86	10.204	mg/L		204		85 - 115 A03
	MSD	1906490-01	956.03	984.49	10.204	mg/L	0.8	279	20	85 - 115 A03
Dissolved Potassium	DUP	1906490-01	7.2102	7.4359		mg/L	3.1		20	
	MS	1906490-01	7.2102	28.442	20.408	mg/L		104		85 - 115
	MSD	1906490-01	7.2102	29.035	20.408	mg/L	2.1	107	20	85 - 115

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Luhdorf & Scalmanini
500 First Street
Woodland, CA 95695

Reported: 03/26/2019 12:06
Project: Dairy Rep MP - Expanded Suite
Project Number: Jose Nunes Dairy
Project Manager: Till Angermann

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes sections for QC Batch IDs B040002, B040237, B040238, B040241, B040242, and B040593.

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:06  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab	
								Percent Recovery	Percent Recovery		
<b>QC Batch ID: B040593</b>		Used client sample: N									
Dissolved Sodium	DUP	1908087-03	108.82	107.74		mg/L	1.0		20		
	MS	1908087-03	108.82	118.02	10.204	mg/L		90.2		85 - 115	
	MSD	1908087-03	108.82	116.27	10.204	mg/L	1.5	73.1	20	85 - 115	A03
Dissolved Potassium	DUP	1908087-03	3.7826	3.7471		mg/L	0.9		20		
	MS	1908087-03	3.7826	13.988	10.204	mg/L		100		85 - 115	
	MSD	1908087-03	3.7826	14.022	10.204	mg/L	0.2	100	20	85 - 115	
<b>QC Batch ID: B041101</b>		Used client sample: N									
Ammonia as N	DUP	1906489-03	0.082500	0.092900		mg/L	11.9		10		J,A02
	MS	1906489-03	0.082500	1.2147	1.1111	mg/L		102		90 - 110	
	MSD	1906489-03	0.082500	1.1740	1.1111	mg/L	3.4	98.2	10	90 - 110	
<b>QC Batch ID: B041205</b>		Used client sample: Y - Description: Field Duplicate #8, 02/28/2019 00:00									
Ammonia as N	DUP	1906490-06	0.074600	0.069400		mg/L	7.2		10		J
	MS	1906490-06	0.074600	1.1696	1.1111	mg/L		98.5		90 - 110	
	MSD	1906490-06	0.074600	1.1851	1.1111	mg/L	1.3	99.9	10	90 - 110	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:06  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Moonshine Dairy  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1906166  
Invoice ID: B334824

Enclosed are the results of analyses for samples received by the laboratory on 2/26/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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### Quality Control Reports

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## Case Narratives

### Case Narrative for Work Order 1906166

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		Chain of Custody						
19-06166		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911						
<b>Report to:</b>								
Expanded Constituent Suite								
Project: Dairy Representative Monitoring Program								
Site: Moonshine Dairy								
Samplers Name: <i>Del Tech / Steynight</i>								
Global ID - GADAIRY00017								
Name: Luhdorff and Scalmanini								
Address: 500 First Street								
City: Woodland								
State: 95695								
City: Till Angermann								
Global ID - GADAIRY00017								
Lab #	Strike out non-sampled wells	Time		Matrix	Q1 P6 Unpreserved	From Filtered Sample: Ammonia-N, NO3-N, NO2-N	From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids	From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3
		Date Sampled	Sampled					
-1		2-28-19	10:25	GW	x	x	x	x
-2			10:45		x	x	x	x
-3			12:00		x	x	x	x
-4			12:51		x	x	x	x
-5			11:08		x	x	x	x
-6			9:58		x	x	x	x
-7			9:15		x	x	x	x
-8			8:52		x	x	x	x
-9		USA	NA	↓ ↓	x	x	x	x
10								
11								
12								
<b>Comments:</b> 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: <a href="mailto:lsc@lsc.com">lsc@lsc.com</a> 4) Send invoices to Jeannette Lovells ( <a href="mailto:jlovels@lsc.com">jlovels@lsc.com</a> ).				Relinquished by: (Signature) <i>[Signature]</i> Date & Time 2/26/19 15:45 Relinquished by: (Signature) <i>[Signature]</i> Date & Time 2/26/19 22:00 Relinquished by: (Signature) <i>[Signature]</i> Date & Time				

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# Laboratories, Inc.

Environmental Testing Laboratory Since 1949

## Chain of Custody and Cooler Receipt Form for 1906166 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-06166

<b>SHIPPING INFORMATION</b> Fed Ex <input type="checkbox"/> UPS <input checked="" type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		<b>SHIPPING CONTAINER</b> Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____	<b>FREE LIQUID</b> YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
--	--	---	---

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 2/26 2200  
 Temperature: (A) 2.4 °C / (C) 2.7 °C Analyst Init: EMR

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A	A	
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCE VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

SHORT HOLDING TIME  
 Cr<sup>6</sup> NO<sub>2</sub>  
 DC CL BOD MBAS COT  
 OP SS

DISTRIBUTION  
 ANALYST  
 SUE-CLT

Comments: \_\_\_\_\_

Sample Numbering Completed By: EMR Date/Time: 2-26-19 2235 Rev 21 05/23/2016  
 A = Actual / C = Corrected

(S:\PFD\cc\WordPerfect\LAB\_COCS\FORMS\ISAWREV 201



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906166-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/26/2019 22:00
	<b>Project Number:</b>	Moonshine Dairy	<b>Sampling Date:</b>	02/26/2019 10:25
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MOO-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906166-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/26/2019 22:00
	<b>Project Number:</b>	Moonshine Dairy	<b>Sampling Date:</b>	02/26/2019 10:45
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MOO-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906166-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/26/2019 22:00
	<b>Project Number:</b>	Moonshine Dairy	<b>Sampling Date:</b>	02/26/2019 12:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MOO-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906166-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/26/2019 22:00
	<b>Project Number:</b>	Moonshine Dairy	<b>Sampling Date:</b>	02/26/2019 12:51
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MOO-MW4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906166-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	02/26/2019 22:00
	<b>Project Number:</b>	Moonshine Dairy	<b>Sampling Date:</b>	02/26/2019 11:08
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MOO-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1906166-06</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/26/2019 22:00
	<b>Project Number:</b> Moonshine Dairy	<b>Sampling Date:</b> 02/26/2019 09:38
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MOO-MW6s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1906166-07</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/26/2019 22:00
	<b>Project Number:</b> Moonshine Dairy	<b>Sampling Date:</b> 02/26/2019 09:15
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MOO-MW7s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1906166-08</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/26/2019 22:00
	<b>Project Number:</b> Moonshine Dairy	<b>Sampling Date:</b> 02/26/2019 08:52
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MOO-MW8d	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1906166-09</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 02/26/2019 22:00
	<b>Project Number:</b> Moonshine Dairy	<b>Sampling Date:</b> 02/26/2019 00:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Field Duplicate	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 13:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Moonshine Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906166-01	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW1, 2/26/2019 10:25:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	79	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	160	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	250	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.4	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	800	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	290	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	4.0	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	260	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.72	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.28	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.024	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.31	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 13:45	03/07/19 15:46	JRG	PE-OP2	1	B039079
2	SM-2320B	02/28/19 07:00	02/28/19 12:31	MEV	MET-1	2	B031756
3	EPA-300.0	02/27/19 14:00	02/27/19 15:34	EMM	IC2	2	B038824
4	SM-2540C	03/01/19 11:30	03/01/19 11:30	CAD	MANUAL	10	B039053
5	EPA-351.2	03/10/19 14:30	03/11/19 14:51	JMH	SC-1	1	B039847
6	EPA-350.1	03/22/19 10:25	03/22/19 13:54	JMH	SC-1	1	B041099
7	EPA-353.2	02/27/19 09:34	02/27/19 09:59	MC1	KONE-1	1	B038965
8	EPA-365.4	03/10/19 14:30	03/12/19 12:38	JMH	SC-1	1	B039848

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Woodland, CA 95695

Reported: 03/26/2019 13:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Moonshine Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906166-02	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW2, 2/26/2019 10:45:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	120	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	130	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	410	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.8	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	970	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	330	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	30	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	260	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1900	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.48	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.090	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.21	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 13:47	03/07/19 15:54	JRG	PE-OP2	1	B039079
2	SM-2320B	02/28/19 07:00	02/28/19 12:37	MEV	MET-1	2	B031756
3	EPA-300.0	02/27/19 14:00	02/27/19 16:56	EMM	IC2	2	B038824
4	SM-2540C	03/01/19 11:30	03/01/19 11:30	CAD	MANUAL	10	B039053
5	EPA-351.2	03/10/19 14:30	03/11/19 14:54	JMH	SC-1	1	B039847
6	EPA-350.1	03/22/19 10:25	03/22/19 13:57	JMH	SC-1	1	B041099
7	EPA-353.2	02/27/19 09:34	02/27/19 09:59	MC1	KONE-1	1	B038965
8	EPA-365.4	03/10/19 14:30	03/12/19 12:42	JMH	SC-1	1	B039848

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**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906166-03	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW3, 2/26/2019 12:00:00PM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	99	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	130	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	180	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.0	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	740	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	200	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	1.6	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	190	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.35	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.12	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.12	mg/L	0.15	0.050	EPA-365.4	ND	J	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 13:50	03/07/19 15:57	JRG	PE-OP2	1	B039079
2	SM-2320B	02/28/19 07:00	02/28/19 12:45	MEV	MET-1	2	B031756
3	EPA-300.0	02/27/19 14:00	02/27/19 17:17	EMM	IC2	2	B038824
4	SM-2540C	03/01/19 11:30	03/01/19 11:30	CAD	MANUAL	5	B039053
5	EPA-351.2	03/10/19 14:30	03/11/19 14:56	JMH	SC-1	1	B039847
6	EPA-350.1	03/22/19 10:25	03/22/19 13:59	JMH	SC-1	1	B041099
7	EPA-353.2	02/27/19 09:34	02/27/19 10:16	MC1	KONE-1	1	B038966
8	EPA-365.4	03/10/19 14:30	03/12/19 12:42	JMH	SC-1	1	B039848

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**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906166-04	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW4, 2/26/2019 12:51:00PM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	65	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	120	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	130	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.8	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	500	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	160	mg/L	0.50	0.067	EPA-300.0	ND		3
Nitrate as N	8.3	mg/L	0.10	0.019	EPA-300.0	ND		3
Sulfate	190	mg/L	1.0	0.14	EPA-300.0	ND		3
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.25	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.089	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.11	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.35	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 13:52	03/07/19 16:00	JRG	PE-OP2	1	B039079
2	SM-2320B	02/28/19 07:00	02/28/19 12:52	MEV	MET-1	2	B031756
3	EPA-300.0	02/27/19 14:00	02/27/19 20:43	EMM	IC2	1	B038824
4	SM-2540C	03/01/19 11:30	03/01/19 11:30	CAD	MANUAL	5	B039053
5	EPA-351.2	03/10/19 14:30	03/11/19 14:56	JMH	SC-1	1	B039847
6	EPA-350.1	03/22/19 10:25	03/22/19 13:59	JMH	SC-1	1	B041099
7	EPA-353.2	02/27/19 09:34	02/27/19 10:16	MC1	KONE-1	1	B038966
8	EPA-365.4	03/10/19 14:30	03/12/19 12:43	JMH	SC-1	1	B039848

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**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906166-05	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW5s, 2/26/2019 11:08:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	96	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	170	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	200	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	1.5	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	690	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	270	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	17	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	300	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.27	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.087	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.015	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.23	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 13:55	03/07/19 16:02	JRG	PE-OP2	1	B039079
2	SM-2320B	02/28/19 07:00	02/28/19 12:57	MEV	MET-1	2	B031756
3	EPA-300.0	02/27/19 14:00	02/27/19 17:58	EMM	IC2	2	B038824
4	SM-2540C	03/01/19 11:30	03/01/19 11:30	CAD	MANUAL	10	B039053
5	EPA-351.2	03/10/19 14:30	03/11/19 14:57	JMH	SC-1	1	B039847
6	EPA-350.1	03/22/19 10:25	03/22/19 14:00	JMH	SC-1	1	B041099
7	EPA-353.2	02/27/19 09:34	02/27/19 10:16	MC1	KONE-1	1	B038966
8	EPA-365.4	03/10/19 14:30	03/12/19 12:43	JMH	SC-1	1	B039848

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**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906166-06	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW6s, 2/26/2019 9:38:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	160	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	180	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	230	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.9	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	840	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	310	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	5.5	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	360	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.95	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.13	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.087	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.42	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 14:00	03/07/19 16:05	JRG	PE-OP2	1	B039079
2	SM-2320B	02/28/19 07:00	02/28/19 13:03	MEV	MET-1	2	B031756
3	EPA-300.0	02/27/19 14:00	02/27/19 19:00	KEB	IC2	2	B038824
4	SM-2540C	03/01/19 11:30	03/01/19 11:30	CAD	MANUAL	10	B039053
5	EPA-351.2	03/10/19 14:30	03/11/19 13:38	JMH	SC-1	1	B039847
6	EPA-350.1	03/23/19 12:00	03/26/19 08:04	JMH	SC-1	1	B041100
7	EPA-353.2	02/27/19 09:34	02/27/19 10:16	MC1	KONE-1	1	B038966
8	EPA-365.4	03/10/19 14:30	03/12/19 12:44	JMH	SC-1	1	B039848

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Reported: 03/26/2019 13:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Moonshine Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906166-07	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW7s, 2/26/2019 9:15:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	200	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	260	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	21	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	800	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	270	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	38	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	520	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2100	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.91	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.087	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.26	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 14:02	03/07/19 16:08	JRG	PE-OP2	1	B039079
2	SM-2320B	02/28/19 07:00	02/28/19 13:11	MEV	MET-1	2	B031756
3	EPA-300.0	02/27/19 14:00	02/27/19 19:21	KEB	IC2	2	B038824
4	SM-2540C	03/01/19 11:30	03/01/19 11:30	CAD	MANUAL	10	B039053
5	EPA-351.2	03/10/19 14:30	03/11/19 13:40	JMH	SC-1	1	B039847
6	EPA-350.1	03/23/19 12:00	03/26/19 08:07	JMH	SC-1	1	B041100
7	EPA-353.2	02/27/19 09:34	02/27/19 10:16	MC1	KONE-1	1	B038966
8	EPA-365.4	03/10/19 14:30	03/12/19 12:44	JMH	SC-1	1	B039848

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Reported: 03/26/2019 13:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Moonshine Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906166-08	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW8d, 2/26/2019 8:52:00AM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	73	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	86	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	240	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	3.4	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	460	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	190	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	11	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	330	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.28	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.068	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.19	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 14:05	03/07/19 16:10	JRG	PE-OP2	1	B039079
2	SM-2320B	02/28/19 07:00	02/28/19 12:05	MEV	MET-1	2	B031756
3	EPA-300.0	02/27/19 14:00	02/27/19 19:41	EMM	IC2	2	B038824
4	SM-2540C	03/01/19 11:30	03/01/19 11:30	CAD	MANUAL	5	B039053
5	EPA-351.2	03/10/19 14:30	03/11/19 13:40	JMH	SC-1	1	B039847
6	EPA-350.1	03/23/19 12:00	03/26/19 08:09	JMH	SC-1	1	B041100
7	EPA-353.2	02/27/19 09:34	02/27/19 10:20	MC1	KONE-1	1	B038966
8	EPA-365.4	03/10/19 14:30	03/12/19 12:45	JMH	SC-1	1	B039848

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

BCL Sample ID: 1906166-09		Client Sample Name: Moonshine Dairy, Field Duplicate, 2/26/2019 12:00:00AM, Del Tech / Stacy Light						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	83	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	160	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	250	mg/L	0.50	0.051	EPA-200.7	0.073		1
Dissolved Potassium	2.6	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	810	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	290	mg/L	1.0	0.13	EPA-300.0	ND	A07	3
Nitrate as N	4.0	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	260	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.69	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.28	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.023	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.29	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	02/27/19 14:07	03/07/19 16:37	JRG	PE-OP2	1	B039080
2	SM-2320B	02/28/19 12:00	02/28/19 13:35	MEV	MET-1	2	B031757
3	EPA-300.0	02/27/19 14:00	02/27/19 20:02	EMM	IC2	2	B038824
4	SM-2540C	03/01/19 11:30	03/01/19 11:30	CAD	MANUAL	10	B039053
5	EPA-351.2	03/10/19 14:30	03/11/19 13:42	JMH	SC-1	1	B039847
6	EPA-350.1	03/23/19 12:00	03/26/19 08:11	JMH	SC-1	1	B041100
7	EPA-353.2	02/27/19 09:34	02/27/19 10:20	MC1	KONE-1	1	B038966
8	EPA-365.4	03/10/19 14:30	03/12/19 12:45	JMH	SC-1	1	B039848

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031756</b>						
Bicarbonate Alkalinity as CaCO3	B031756-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031756-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031756-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031757</b>						
Bicarbonate Alkalinity as CaCO3	B031757-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031757-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031757-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B038824</b>						
Chloride	B038824-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	B038824-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B038824-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B038965</b>						
Nitrite as N	B038965-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B038966</b>						
Nitrite as N	B038966-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039053</b>						
Total Dissolved Solids @ 180 C	B039053-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B039079</b>						
Dissolved Calcium	B039079-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039079-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039079-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B039079-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039080</b>						
Dissolved Calcium	B039080-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039080-BLK1	ND	mg/L	0.050	0.019	
<b>Dissolved Sodium</b>	<b>B039080-BLK1</b>	<b>0.073048</b>	<b>mg/L</b>	<b>0.50</b>	<b>0.051</b>	<b>J</b>
Dissolved Potassium	B039080-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039847</b>						
Total Kjeldahl Nitrogen	B039847-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B039848</b>						

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B039848</b>						
Total Phosphate	B039848-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B041099</b>						
Ammonia as N	B041099-BLK1	ND	mg/L	0.20	0.050	
<b>QC Batch ID: B041100</b>						
Ammonia as N	B041100-BLK1	ND	mg/L	0.20	0.050	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B038824</b>										
Chloride	B038824-BS1	LCS	52.214	50.000	mg/L	104		90 - 110		
Nitrate as N	B038824-BS1	LCS	5.1350	5.0000	mg/L	103		90 - 110		
Sulfate	B038824-BS1	LCS	104.09	100.00	mg/L	104		90 - 110		
<b>QC Batch ID: B038965</b>										
Nitrite as N	B038965-BS1	LCS	0.49723	0.50000	mg/L	99.4		90 - 110		
<b>QC Batch ID: B038966</b>										
Nitrite as N	B038966-BS1	LCS	0.50790	0.50000	mg/L	102		90 - 110		
<b>QC Batch ID: B039053</b>										
Total Dissolved Solids @ 180 C	B039053-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B039079</b>										
Dissolved Calcium	B039079-BS1	LCS	10.096	10.000	mg/L	101		85 - 115		
Dissolved Magnesium	B039079-BS1	LCS	10.206	10.000	mg/L	102		85 - 115		
Dissolved Sodium	B039079-BS1	LCS	9.2314	10.000	mg/L	92.3		85 - 115		
Dissolved Potassium	B039079-BS1	LCS	9.2591	10.000	mg/L	92.6		85 - 115		
<b>QC Batch ID: B039080</b>										
Dissolved Calcium	B039080-BS1	LCS	10.032	10.000	mg/L	100		85 - 115		
Dissolved Magnesium	B039080-BS1	LCS	10.081	10.000	mg/L	101		85 - 115		
Dissolved Sodium	B039080-BS1	LCS	9.1734	10.000	mg/L	91.7		85 - 115		
Dissolved Potassium	B039080-BS1	LCS	9.3099	10.000	mg/L	93.1		85 - 115		
<b>QC Batch ID: B039847</b>										
Total Kjeldahl Nitrogen	B039847-BS1	LCS	2.0157	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B039848</b>										
Total Phosphate	B039848-BS1	LCS	3.4207	3.0660	mg/L	112		85 - 115		
<b>QC Batch ID: B041099</b>										
Ammonia as N	B041099-BS1	LCS	1.0153	1.0000	mg/L	102		90 - 110		
<b>QC Batch ID: B041100</b>										
Ammonia as N	B041100-BS1	LCS	1.0462	1.1111	mg/L	94.2		90 - 110		

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500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 13:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Moonshine Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry) Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B031756</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1906166-08	457.31	453.96		mg/L	0.7		10	
Carbonate Alkalinity as CaCO3	DUP	1906166-08	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1906166-08	ND	ND		mg/L			10	
<b>QC Batch ID: B031757</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1906166-09	811.17	810.26		mg/L	0.1		10	
Carbonate Alkalinity as CaCO3	DUP	1906166-09	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1906166-09	ND	ND		mg/L			10	
<b>QC Batch ID: B038824</b>		Used client sample: Y - Description: MOO-MW1, 02/26/2019 10:25								
Chloride	DUP	1906166-01	286.71	288.83		mg/L	0.7		10	
	MS	1906166-01	286.71	384.85	101.01	mg/L		97.2		80 - 120
	MSD	1906166-01	286.71	386.06	101.01	mg/L	0.3	98.4	10	80 - 120
Nitrate as N	DUP	1906166-01	3.9680	3.9840		mg/L	0.4		10	
	MS	1906166-01	3.9680	14.754	10.101	mg/L		107		80 - 120
	MSD	1906166-01	3.9680	14.782	10.101	mg/L	0.2	107	10	80 - 120
Sulfate	DUP	1906166-01	255.76	256.17		mg/L	0.2		10	
	MS	1906166-01	255.76	476.18	202.02	mg/L		109		80 - 120
	MSD	1906166-01	255.76	477.28	202.02	mg/L	0.2	110	10	80 - 120
<b>QC Batch ID: B038965</b>		Used client sample: N								
Nitrite as N	DUP	1906056-03	ND	ND		mg/L			10	
	MS	1906056-03	ND	0.53234	0.52632	mg/L		101		90 - 110
	MSD	1906056-03	ND	0.55225	0.52632	mg/L	3.7	105	10	90 - 110
<b>QC Batch ID: B038966</b>		Used client sample: Y - Description: MOO-MW3, 02/26/2019 12:00								
Nitrite as N	DUP	1906166-03	ND	ND		mg/L			10	
	MS	1906166-03	ND	0.51809	0.50000	mg/L		104		90 - 110
	MSD	1906166-03	ND	0.52402	0.50000	mg/L	1.1	105	10	90 - 110
<b>QC Batch ID: B039053</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1906108-02	615.00	620.00		mg/L	0.8		10	
<b>QC Batch ID: B039079</b>		Used client sample: N								
Dissolved Calcium	DUP	1906130-01	20.964	20.515		mg/L	2.2		20	
	MS	1906130-01	20.964	31.156	10.204	mg/L		99.9		85 - 115
	MSD	1906130-01	20.964	31.088	10.204	mg/L	0.2	99.2	20	85 - 115
Dissolved Magnesium	DUP	1906130-01	11.624	11.514		mg/L	0.9		20	
	MS	1906130-01	11.624	21.966	10.204	mg/L		101		85 - 115
	MSD	1906130-01	11.624	21.963	10.204	mg/L	0.0	101	20	85 - 115

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 13:32  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Moonshine Dairy  
Project Manager: Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
<b>QC Batch ID: B039079</b>		Used client sample: N									
Dissolved Sodium	DUP	1906130-01	38.870	37.668		mg/L	3.1		20		
	MS	1906130-01	38.870	48.423	10.204	mg/L		93.6		85 - 115	
	MSD	1906130-01	38.870	48.692	10.204	mg/L	0.6	96.3	20	85 - 115	
Dissolved Potassium	DUP	1906130-01	3.0997	3.1659		mg/L	2.1		20		
	MS	1906130-01	3.0997	13.131	10.204	mg/L		98.3		85 - 115	
	MSD	1906130-01	3.0997	13.005	10.204	mg/L	1.0	97.1	20	85 - 115	
<b>QC Batch ID: B039080</b>		Used client sample: N									
Dissolved Calcium	DUP	1906167-01	151.47	150.26		mg/L	0.8		20		
	MS	1906167-01	151.47	163.55	10.204	mg/L		118		85 - 115	A03
	MSD	1906167-01	151.47	158.00	10.204	mg/L	3.5	64.0	20	85 - 115	A03
Dissolved Magnesium	DUP	1906167-01	114.60	115.75		mg/L	1.0		20		
	MS	1906167-01	114.60	125.47	10.204	mg/L		106		85 - 115	
	MSD	1906167-01	114.60	124.88	10.204	mg/L	0.5	101	20	85 - 115	
Dissolved Sodium	DUP	1906167-01	137.36	135.27		mg/L	1.5		20		
	MS	1906167-01	137.36	149.29	10.204	mg/L		117		85 - 115	A03
	MSD	1906167-01	137.36	144.08	10.204	mg/L	3.6	65.8	20	85 - 115	A03
Dissolved Potassium	DUP	1906167-01	5.9881	5.9186		mg/L	1.2		20		
	MS	1906167-01	5.9881	16.260	10.204	mg/L		101		85 - 115	
	MSD	1906167-01	5.9881	16.418	10.204	mg/L	1.0	102	20	85 - 115	
<b>QC Batch ID: B039847</b>		Used client sample: Y - Description: MOO-MW1, 02/26/2019 10:25									
Total Kjeldahl Nitrogen	DUP	1906166-01	0.71830	0.70550		mg/L	1.8		20		
	MS	1906166-01	0.71830	2.7665	2.0000	mg/L		102		90 - 110	
	MSD	1906166-01	0.71830	2.7811	2.0000	mg/L	0.5	103	20	90 - 110	
<b>QC Batch ID: B039848</b>		Used client sample: Y - Description: MOO-MW1, 02/26/2019 10:25									
Total Phosphate	DUP	1906166-01	0.30785	0.29711		mg/L	3.5		20		
	MS	1906166-01	0.30785	3.3219	3.0660	mg/L		98.3		80 - 120	
	MSD	1906166-01	0.30785	3.2971	3.0660	mg/L	0.8	97.5	20	80 - 120	
<b>QC Batch ID: B041099</b>		Used client sample: Y - Description: MOO-MW1, 02/26/2019 10:25									
Ammonia as N	DUP	1906166-01	0.27790	0.26690		mg/L	4.0		10		
	MS	1906166-01	0.27790	1.2967	1.1111	mg/L		91.7		90 - 110	
	MSD	1906166-01	0.27790	1.3051	1.1111	mg/L	0.6	92.4	10	90 - 110	
<b>QC Batch ID: B041100</b>		Used client sample: Y - Description: MOO-MW6s, 02/26/2019 09:38									
Ammonia as N	DUP	1906166-06	0.13220	0.13300		mg/L	0.6		10		J
	MS	1906166-06	0.13220	1.1054	1.0000	mg/L		97.3		90 - 110	
	MSD	1906166-06	0.13220	1.2767	1.1111	mg/L	14.4	103	10	90 - 110	Q02

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 13:32  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q02 Matrix spike precision is not within the control limits.





Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Tony L. Lopes Dairy LP

BCL Project: Dairy Rep MP - Expanded Suite

BCL Work Order: 1906594

Invoice ID: B334801

Enclosed are the results of analyses for samples received by the laboratory on 3/1/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1906594

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.		Chain of Custody			
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Analysis Requested			
<b>Report to:</b> 19-06594 Lufdorff and Scalmani Expanded Constituent Suite					
Project: Dairy Representative Monitoring Program Site: Tony L. Lopes Dairy LP Sampling Name: <i>Deltek Antonio Morales</i> Global ID - GADAIRY00018					
Name: Lufdorff and Scalmani Address: 500 First Street City: Woodland State: CA Attn: Till Angermann		From Filtered Sample: Na, K, Mg, Ca, Cl, SO4 (as SO4), Total Dissolved Solids			
From Filtered Sample: Ammonia-N, NO3-N, NO2-N		From Unfiltered Sample: Total Kjeldahl Nitrogen, Total Phosphate (as PO4), Alkalinity (HCO3, CO3 & OH) as CaCO3			
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	OT Pp Unpreserved
1	TON-MW1s, TON-MW1d	3/1/19		GW	x
2	TON-MW2s, TON-MW2d		1606		x
3	TON-MW3s, TON-MW3d		1528		x
4	TON-MW4s, TON-MW4d				x
5	TON-MW5s, TON-MW5d				x
6	TON-MW6s, TON-MW6d				x
7	TON-MW7s, TON-MW7d		1630		x
8	TON-MW8s, TON-MW8d				x
9	Field Duplicate				x
10					x
11					x
12					x

  

SHORT HOLDING TIME CF <sup>10</sup> (NO <sub>2</sub> ) (NO <sub>3</sub> ) OP SS DO C <sub>10</sub> BOD MBAS COT	Received by: <i>[Signature]</i> Date & Time: 3/1/19 16:40
Relinquished by: <i>[Signature]</i> Date & Time: 3/1/19 2200	Received by: <i>[Signature]</i> Date & Time: 3/1/19 2200

  

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Lufdorff and Scalmani Consulting Engineers via email: [lsc@lufdorff.com](mailto:lsc@lufdorff.com), [rls@lufdorff.com](mailto:rls@lufdorff.com), [fovelis@lsc.com](mailto:fovelis@lsc.com)  
 4) Send invoices to Jeanette Lovelis ([fovelis@lsc.com](mailto:fovelis@lsc.com)).

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 1906594

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received EVES  NO  
 Emissivity: 0.98 Container: PE Thermometer ID: ZOB Date/Time: 3/1/2000  
 Temperature: (A) 3.1 °C / (C) 3.4 °C Analyst Init: ELC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/508/5080										
QT EPA 515/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: GAJ Date/Time: 3/1 2215  
 A = Actual / C = Corrected

Rev 21 05/23/2016  
05:\WPDoc\WorkProduct\LAB\_DOC\FORMS\SAMRECovr 201



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906594-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Tony L. Lopes	<b>Sampling Date:</b>	03/01/2019 16:06
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906594-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Tony L. Lopes	<b>Sampling Date:</b>	03/01/2019 15:28
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906594-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Tony L. Lopes	<b>Sampling Date:</b>	03/01/2019 16:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906594-01	<b>Client Sample Name:</b> Tony L. Lopes, TON-MW2s, 3/1/2019 4:06:00PM, Del-Tech/Ashley Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	100	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	200	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	610	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	100	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	1500	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	570	mg/L	2.5	0.34	EPA-300.0	1.7	A07	3
Nitrate as N	24	mg/L	0.20	0.038	EPA-300.0	ND	A07	4
Sulfate	240	mg/L	2.0	0.28	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	2900	mg/L	200	100	SM-2540C	ND		5
Total Kjeldahl Nitrogen	8.4	mg/L	0.50	0.090	EPA-351.2	ND	A07	6
Ammonia as N	4.9	mg/L	1.0	0.25	EPA-350.1	ND	A07	7
Nitrite as N	0.47	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	20	mg/L	1.9	0.62	EPA-365.4	ND	A07	9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:35	03/08/19 22:28	JRG	PE-OP2	1	B039548
2	SM-2320B	03/05/19 15:00	03/05/19 20:09	MEV	MET-1	2	B031787
3	EPA-300.0	03/02/19 12:00	03/03/19 08:00	SAV	IC5	5	B039131
4	EPA-300.0	03/02/19 12:00	03/02/19 21:52	SAV	IC5	2	B039131
5	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	20	B039607
6	EPA-351.2	03/15/19 20:00	03/18/19 13:45	JMH	SC-1	2.500	B040509
7	EPA-350.1	03/23/19 10:34	03/23/19 13:19	JMH	SC-1	5	B041207
8	EPA-353.2	03/02/19 00:55	03/02/19 01:00	TMS	KONE-1	1	B039506
9	EPA-365.4	03/15/19 20:00	03/19/19 13:29	JMH	SC-1	12.500	B040510

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Woodland, CA 95695

Reported: 03/26/2019 12:11  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Tony L. Lopes Dairy LP  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906594-02	<b>Client Sample Name:</b> Tony L. Lopes, TON-MW3s, 3/1/2019 3:28:00PM, Del-Tech/Ashley Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	200	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	230	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	730	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	180	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	1600	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	1200	mg/L	5.0	0.67	EPA-300.0	3.4	A07	3
Nitrate as N	9.5	mg/L	0.50	0.095	EPA-300.0	ND	A07	4
Sulfate	150	mg/L	5.0	0.70	EPA-300.0	ND	A07	4
Total Dissolved Solids @ 180 C	4100	mg/L	200	100	SM-2540C	ND		5
Total Kjeldahl Nitrogen	27	mg/L	2.5	0.45	EPA-351.2	ND	A07	6
Ammonia as N	7.2	mg/L	1.0	0.25	EPA-350.1	ND	A07	7
Nitrite as N	0.30	mg/L	0.050	0.010	EPA-353.2	ND		8
Total Phosphate	12	mg/L	0.38	0.12	EPA-365.4	ND	A07	9

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:40	03/08/19 22:31	JRG	PE-OP2	1	B039548
2	SM-2320B	03/06/19 07:00	03/06/19 14:06	MEV	MET-1	2	B031790
3	EPA-300.0	03/02/19 12:00	03/03/19 07:42	SAV	IC5	10	B039131
4	EPA-300.0	03/02/19 12:00	03/02/19 20:58	SAV	IC5	5	B039131
5	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	20	B039607
6	EPA-351.2	03/15/19 20:00	03/18/19 14:26	JMH	SC-1	12.500	B040509
7	EPA-350.1	03/23/19 10:34	03/23/19 13:21	JMH	SC-1	5	B041207
8	EPA-353.2	03/02/19 00:55	03/02/19 01:00	TMS	KONE-1	1	B039506
9	EPA-365.4	03/15/19 20:00	03/19/19 13:04	JMH	SC-1	2.500	B040510

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Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906594-03	<b>Client Sample Name:</b> Tony L. Lopes, TON-MW7s, 3/1/2019 4:30:00PM, Del-Tech/Ashley Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	44	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	62	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	180	mg/L	0.50	0.051	EPA-200.7	0.12		1
Dissolved Potassium	1.3	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate Alkalinity as CaCO3	310	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	290	mg/L	1.0	0.13	EPA-300.0	0.68	A07	3
Nitrate as N	1.7	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	71	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	950	mg/L	50	25	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.17	mg/L	0.20	0.036	EPA-351.2	ND	J	5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.29	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 12:45	03/08/19 22:33	JRG	PE-OP2	1	B039548
2	SM-2320B	03/06/19 07:00	03/06/19 14:14	MEV	MET-1	2	B031790
3	EPA-300.0	03/02/19 12:00	03/02/19 22:10	SAV	IC5	2	B039131
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	5	B039607
5	EPA-351.2	03/15/19 20:00	03/18/19 13:47	JMH	SC-1	1	B040509
6	EPA-350.1	03/23/19 10:34	03/23/19 12:32	JMH	SC-1	1	B041207
7	EPA-353.2	03/02/19 00:55	03/02/19 01:00	TMS	KONE-1	1	B039506
8	EPA-365.4	03/15/19 20:00	03/19/19 13:05	JMH	SC-1	1	B040510

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**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031787</b>						
Bicarbonate Alkalinity as CaCO3	B031787-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031787-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031787-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031790</b>						
Bicarbonate Alkalinity as CaCO3	B031790-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031790-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031790-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B039131</b>						
Chloride	B039131-BLK1	0.34000	mg/L	0.50	0.067	J
Nitrate as N	B039131-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B039131-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B039506</b>						
Nitrite as N	B039506-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039548</b>						
Dissolved Calcium	B039548-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039548-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039548-BLK1	0.12042	mg/L	0.50	0.051	J
Dissolved Potassium	B039548-BLK1	0.11720	mg/L	1.0	0.10	J
<b>QC Batch ID: B039607</b>						
Total Dissolved Solids @ 180 C	B039607-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B040509</b>						
Total Kjeldahl Nitrogen	B040509-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040510</b>						
Total Phosphate	B040510-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B041207</b>						
Ammonia as N	B041207-BLK1	ND	mg/L	0.20	0.050	

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Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039131</b>										
Chloride	B039131-BS1	LCS	54.323	50.000	mg/L	109		90 - 110		
Nitrate as N	B039131-BS1	LCS	5.3070	5.0000	mg/L	106		90 - 110		
Sulfate	B039131-BS1	LCS	108.59	100.00	mg/L	109		90 - 110		
<b>QC Batch ID: B039506</b>										
Nitrite as N	B039506-BS1	LCS	0.49205	0.50000	mg/L	98.4		90 - 110		
<b>QC Batch ID: B039548</b>										
Dissolved Calcium	B039548-BS1	LCS	10.516	10.000	mg/L	105		85 - 115		
Dissolved Magnesium	B039548-BS1	LCS	10.100	10.000	mg/L	101		85 - 115		
Dissolved Sodium	B039548-BS1	LCS	10.176	10.000	mg/L	102		85 - 115		
Dissolved Potassium	B039548-BS1	LCS	9.2240	10.000	mg/L	92.2		85 - 115		
<b>QC Batch ID: B039607</b>										
Total Dissolved Solids @ 180 C	B039607-BS1	LCS	605.00	586.00	mg/L	103		90 - 110		
<b>QC Batch ID: B040509</b>										
Total Kjeldahl Nitrogen	B040509-BS1	LCS	1.9126	2.0000	mg/L	95.6		90 - 110		
<b>QC Batch ID: B040510</b>										
Total Phosphate	B040510-BS1	LCS	3.0837	3.0660	mg/L	101		85 - 115		
<b>QC Batch ID: B041207</b>										
Ammonia as N	B041207-BS1	LCS	0.96820	1.0000	mg/L	96.8		90 - 110		

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Reported: 03/26/2019 12:11  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Tony L. Lopes Dairy LP  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B031787</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1906593-06	602.75	601.84		mg/L	0.2		10	
Carbonate Alkalinity as CaCO3	DUP	1906593-06	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1906593-06	ND	ND		mg/L			10	
<b>QC Batch ID: B031790</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1906595-07	334.08	334.39		mg/L	0.1		10	
Carbonate Alkalinity as CaCO3	DUP	1906595-07	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1906595-07	ND	ND		mg/L			10	
<b>QC Batch ID: B039131</b>		Used client sample: N								
Chloride	DUP	1906593-01	119.44	122.20		mg/L	2.3		10	
	MS	1906593-01	119.44	235.99	101.01	mg/L		115		80 - 120
	MSD	1906593-01	119.44	236.33	101.01	mg/L	0.1	116	10	80 - 120
Nitrate as N	DUP	1906593-01	31.804	32.494		mg/L	2.1		10	
	MS	1906593-01	31.804	42.701	10.101	mg/L		108		80 - 120
	MSD	1906593-01	31.804	42.661	10.101	mg/L	0.1	107	10	80 - 120
Sulfate	DUP	1906593-01	120.20	123.12		mg/L	2.4		10	
	MS	1906593-01	120.20	356.53	202.02	mg/L		117		80 - 120
	MSD	1906593-01	120.20	356.41	202.02	mg/L	0.0	117	10	80 - 120
<b>QC Batch ID: B039506</b>		Used client sample: N								
Nitrite as N	DUP	1906593-01	ND	ND		mg/L			10	
	MS	1906593-01	ND	0.53400	0.52632	mg/L		101		90 - 110
	MSD	1906593-01	ND	0.52640	0.52632	mg/L	1.4	100	10	90 - 110
<b>QC Batch ID: B039548</b>		Used client sample: N								
Dissolved Calcium	DUP	1906593-01	100.46	103.85		mg/L	3.3		20	
	MS	1906593-01	100.46	112.73	10.204	mg/L		120		85 - 115 A03
	MSD	1906593-01	100.46	114.03	10.204	mg/L	1.2	133	20	85 - 115 A03
Dissolved Magnesium	DUP	1906593-01	28.899	29.232		mg/L	1.1		20	
	MS	1906593-01	28.899	39.072	10.204	mg/L		99.7		85 - 115
	MSD	1906593-01	28.899	39.645	10.204	mg/L	1.5	105	20	85 - 115
Dissolved Sodium	DUP	1906593-01	408.65	419.19		mg/L	2.5		20	
	MS	1906593-01	408.65	424.89	10.204	mg/L		159		85 - 115 A03
	MSD	1906593-01	408.65	429.20	10.204	mg/L	1.0	201	20	85 - 115 A03
Dissolved Potassium	DUP	1906593-01	4.6168	4.6904		mg/L	1.6		20	
	MS	1906593-01	4.6168	14.943	10.204	mg/L		101		85 - 115
	MSD	1906593-01	4.6168	15.042	10.204	mg/L	0.7	102	20	85 - 115
<b>QC Batch ID: B039607</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1906593-01	1450.0	1430.0		mg/L	1.4		10	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B040509</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1906593-04	0.47950	0.41530		mg/L	14.3		20	
	MS	1906593-04	0.47950	1.8704	2.0000	mg/L		69.5		90 - 110 Q03
	MSD	1906593-04	0.47950	1.9203	2.0000	mg/L	2.6	72.0	20	90 - 110 Q03
<b>QC Batch ID: B040510</b>		Used client sample: N								
Total Phosphate	DUP	1906593-04	0.091373	0.12111		mg/L	28.0		20	J,A02
	MS	1906593-04	0.091373	3.0883	3.0660	mg/L		97.7		80 - 120
	MSD	1906593-04	0.091373	3.0726	3.0660	mg/L	0.5	97.2	20	80 - 120
<b>QC Batch ID: B041207</b>		Used client sample: N								
Ammonia as N	DUP	1906592-05	ND	ND		mg/L			10	
	MS	1906592-05	ND	1.1168	1.1111	mg/L		101		90 - 110
	MSD	1906592-05	ND	1.1217	1.1111	mg/L	0.4	101	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:11  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.

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Date of Report: 03/26/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Tony L. Lopes Dairy LP  
BCL Project: Dairy Rep MP - Expanded Suite  
BCL Work Order: 1906590  
Invoice ID: B334826

Enclosed are the results of analyses for samples received by the laboratory on 3/1/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1906590

Samples were filtered through a 0.45 micron filter for requested dissolved analysis.



BC Laboratories, Inc.			Chain of Custody		
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911					
Report to:			Analysis Requested		
Expanded Constituent Suite			From Unfiltered Sample:		
Project: Dairy Representative Monitoring Program			Total Kjeldahl Nitrogen, Total Phosphate (as PO <sub>4</sub> ), Alkalinity (HCO <sub>3</sub> , CO <sub>3</sub> & OH) as CaCO <sub>3</sub>		
Site: Tony L. Lopes Dairy LP			From Filtered Sample:		
Samplers Name: Del Tech / Stacy Taylor			Na, K, Mg, Ca, Cl, SO <sub>4</sub> (as SO <sub>4</sub> ), Total Dissolved Solids		
Global ID - GADAIRY00018			From Filtered Sample:		
			Ammonia-N, NO <sub>3</sub> -N, NO <sub>2</sub> -N		
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Of Pe Unpreserved
1	TON-MW1s, <del>TON-MW1d</del>	3-1-19	1514	GW	x
2	TON-MW2s, TON-MW2d				x
3	TON-MW3s, TON-MW3d				x
-2	TON-MW4s, <del>TON-MW4d</del>	3-1-19	1425	GW	x
-3	TON-MW5s, <del>TON-MW5d</del>	3-1-19	1450	GW	x
-4	TON-MW6s, <del>TON-MW6d</del>	3-1-19	1545	GW	x
-5	TON-MW7s, <del>TON-MW7d</del>	3-1-19	1614	GW	x
-6	TON-MW8s, <del>TON-MW8d</del>				x
	Field Duplicate				x
10					x
11					x
12					x

  

SHOWN HOLDING TIME DO O <sub>2</sub> BOD MBAS COT	Received By: [Signature] Date & Time: 3/1/19 16:40
Relinquished by: [Signature] Date & Time: 3/1/19 22:00	Received By: [Signature] Date & Time: 3/1/19 22:00

  

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Lohdorff and Scalmani Consulting Engineers via email: llavagnino@lscce.com, ronyson@lscce.com, pdhalwai@lscce.com, jlovelis@lscce.com  
 4) Send invoices to Jeannette Lovelis (jlovelis@lscce.com).

[Handwritten signature]



BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-06590

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers   
 Intact? Yes  No  Intact? Yes  No  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received EYES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208  
 Temperature: (A) 2.6 °C / (C) 2.4 °C Date/Time: 3/1/2000  
 Analyst Init: ER

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: GSP Date/Time: 3/1/2000 22:10  
 A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1906590-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Tony L. Lopes	<b>Sampling Date:</b>	03/01/2019 15:14
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906590-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Tony L. Lopes	<b>Sampling Date:</b>	03/01/2019 14:25
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906590-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Tony L. Lopes	<b>Sampling Date:</b>	03/01/2019 14:50
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906590-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Tony L. Lopes	<b>Sampling Date:</b>	03/01/2019 15:45
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1906590-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	03/01/2019 22:00
	<b>Project Number:</b>	Tony L. Lopes	<b>Sampling Date:</b>	03/01/2019 16:14
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW8s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906590-01	<b>Client Sample Name:</b> Tony L. Lopes, TON-MW1s, 3/1/2019 3:14:00PM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	72	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	310	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	130	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	970	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	330	mg/L	1.0	0.13	EPA-300.0	0.89	A07	3
Nitrate as N	26	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	160	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	45	mg/L	2.5	0.45	EPA-351.2	ND	A07	5
Ammonia as N	43	mg/L	10	2.5	EPA-350.1	ND	A07	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.27	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 11:44	03/08/19 21:03	JRG	PE-OP2	1	B039547
2	SM-2320B	03/05/19 13:00	03/05/19 16:57	MEV	MET-1	2	B031785
3	EPA-300.0	03/02/19 12:00	03/02/19 21:16	SAV	IC5	2	B039133
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	10	B039606
5	EPA-351.2	03/13/19 21:30	03/15/19 12:43	JMH	SC-1	12.500	B040241
6	EPA-350.1	03/23/19 10:27	03/23/19 14:15	JMH	SC-1	50	B041205
7	EPA-353.2	03/01/19 23:51	03/01/19 23:51	TMS	KONE-1	1	B039504
8	EPA-365.4	03/18/19 20:00	03/19/19 14:22	JMH	SC-1	1	B040707

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Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906590-02	<b>Client Sample Name:</b> Tony L. Lopes, TON-MW4s, 3/1/2019 2:25:00PM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	150	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	140	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	440	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	14	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	570	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	610	mg/L	2.5	0.34	EPA-300.0	2.2	A07	3
Nitrate as N	32	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	370	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2100	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.49	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.093	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	0.14	mg/L	0.15	0.050	EPA-365.4	ND	J	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 11:45	03/08/19 21:16	JRG	PE-OP2	1	B039547
2	SM-2320B	03/05/19 13:00	03/05/19 17:05	MEV	MET-1	2	B031785
3	EPA-300.0	03/02/19 12:00	03/02/19 20:22	SAV	IC5	5	B039133
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	10	B039606
5	EPA-351.2	03/14/19 20:30	03/18/19 17:30	JMH	SC-1	1	B040388
6	EPA-350.1	03/23/19 10:27	03/23/19 13:01	JMH	SC-1	1	B041205
7	EPA-353.2	03/01/19 23:51	03/01/19 23:51	TMS	KONE-1	1	B039504
8	EPA-365.4	03/14/19 20:30	03/19/19 10:26	JMH	SC-1	1	B040389

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906590-03	<b>Client Sample Name:</b> Tony L. Lopes, TON-MW5s, 3/1/2019 2:50:00PM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	130	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	130	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	420	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	2.9	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	860	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	340	mg/L	2.5	0.34	EPA-300.0	2.2	A07	3
Nitrate as N	75	mg/L	0.50	0.095	EPA-300.0	ND	A07	3
Sulfate	160	mg/L	5.0	0.70	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.82	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.017	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	ND	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 11:47	03/08/19 21:19	JRG	PE-OP2	1	B039547
2	SM-2320B	03/05/19 14:00	03/05/19 17:29	MEV	MET-1	2	B031786
3	EPA-300.0	03/02/19 12:00	03/02/19 20:40	SAV	IC5	5	B039133
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	10	B039606
5	EPA-351.2	03/14/19 20:30	03/18/19 17:32	JMH	SC-1	1	B040388
6	EPA-350.1	03/23/19 10:27	03/23/19 13:03	JMH	SC-1	1	B041205
7	EPA-353.2	03/01/19 23:51	03/01/19 23:51	TMS	KONE-1	1	B039504
8	EPA-365.4	03/14/19 20:30	03/19/19 10:26	JMH	SC-1	1	B040389

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906590-04	<b>Client Sample Name:</b> Tony L. Lopes, TON-MW6s, 3/1/2019 3:45:00PM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	88	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	110	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	400	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	14	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	560	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	400	mg/L	1.0	0.13	EPA-300.0	0.89	A07	3
Nitrate as N	6.9	mg/L	0.20	0.038	EPA-300.0	ND	A07	3
Sulfate	400	mg/L	2.0	0.28	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1900	mg/L	100	50	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.56	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	0.052	mg/L	0.20	0.050	EPA-350.1	ND	J	6
Nitrite as N	0.22	mg/L	0.050	0.010	EPA-353.2	ND		7
Total Phosphate	3.7	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 11:50	03/08/19 21:27	JRG	PE-OP2	1	B039547
2	SM-2320B	03/05/19 14:00	03/05/19 17:42	MEV	MET-1	2	B031786
3	EPA-300.0	03/02/19 12:00	03/02/19 21:34	SAV	IC5	2	B039133
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	10	B039606
5	EPA-351.2	03/14/19 20:30	03/18/19 17:32	JMH	SC-1	1	B040388
6	EPA-350.1	03/23/19 10:27	03/23/19 13:05	JMH	SC-1	1	B041205
7	EPA-353.2	03/01/19 23:51	03/01/19 23:51	TMS	KONE-1	1	B039504
8	EPA-365.4	03/14/19 20:30	03/19/19 10:27	JMH	SC-1	1	B040389

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 03/26/2019 12:54  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Tony L. Lopes Dairy LP  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1906590-05	<b>Client Sample Name:</b> Tony L. Lopes, TON-MW8s, 3/1/2019 4:14:00PM, Del Tech / Stacy Light
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Calcium	210	mg/L	0.10	0.016	EPA-200.7	ND		1
Dissolved Magnesium	240	mg/L	0.050	0.019	EPA-200.7	ND		1
Dissolved Sodium	780	mg/L	0.50	0.051	EPA-200.7	ND		1
Dissolved Potassium	4.4	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate Alkalinity as CaCO3	760	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND	A07	2
Chloride	990	mg/L	5.0	0.67	EPA-300.0	4.4	A07	3
Nitrate as N	32	mg/L	1.0	0.19	EPA-300.0	ND	A07	3
Sulfate	1100	mg/L	10	1.4	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	4000	mg/L	200	100	SM-2540C	ND		4
Total Kjeldahl Nitrogen	0.85	mg/L	0.20	0.036	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		6
Nitrite as N	0.034	mg/L	0.050	0.010	EPA-353.2	ND	J	7
Total Phosphate	0.66	mg/L	0.15	0.050	EPA-365.4	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	03/05/19 11:55	03/08/19 21:29	JRG	PE-OP2	1	B039547
2	SM-2320B	03/05/19 14:00	03/05/19 17:48	MEV	MET-1	2	B031786
3	EPA-300.0	03/02/19 12:00	03/02/19 22:45	SAV	IC5	10	B039133
4	SM-2540C	03/07/19 16:00	03/07/19 16:00	CAD	MANUAL	20	B039606
5	EPA-351.2	03/14/19 20:30	03/18/19 17:33	JMH	SC-1	1	B040388
6	EPA-350.1	03/23/19 10:33	03/23/19 12:36	JMH	SC-1	1	B041206
7	EPA-353.2	03/01/19 23:51	03/01/19 23:51	TMS	KONE-1	1	B039504
8	EPA-365.4	03/14/19 20:30	03/19/19 10:28	JMH	SC-1	1	B040389

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Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B031785</b>						
Bicarbonate Alkalinity as CaCO3	B031785-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031785-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031785-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B031786</b>						
Bicarbonate Alkalinity as CaCO3	B031786-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	B031786-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	B031786-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: B039133</b>						
Chloride	B039133-BLK1	0.44500	mg/L	0.50	0.067	J
Nitrate as N	B039133-BLK1	ND	mg/L	0.10	0.019	
Sulfate	B039133-BLK1	ND	mg/L	1.0	0.14	
<b>QC Batch ID: B039504</b>						
Nitrite as N	B039504-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B039547</b>						
Dissolved Calcium	B039547-BLK1	ND	mg/L	0.10	0.016	
Dissolved Magnesium	B039547-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	B039547-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	B039547-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: B039606</b>						
Total Dissolved Solids @ 180 C	B039606-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B040241</b>						
Total Kjeldahl Nitrogen	B040241-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040388</b>						
Total Kjeldahl Nitrogen	B040388-BLK1	ND	mg/L	0.20	0.036	
<b>QC Batch ID: B040389</b>						
Total Phosphate	B040389-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B040707</b>						
Total Phosphate	B040707-BLK1	ND	mg/L	0.15	0.050	
<b>QC Batch ID: B041205</b>						
Ammonia as N	B041205-BLK1	ND	mg/L	0.20	0.050	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B041206</b>						
Ammonia as N	B041206-BLK1	ND	mg/L	0.20	0.050	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B039133</b>										
Chloride	B039133-BS1	LCS	54.292	50.000	mg/L	109		90 - 110		
Nitrate as N	B039133-BS1	LCS	5.3530	5.0000	mg/L	107		90 - 110		
Sulfate	B039133-BS1	LCS	109.20	100.00	mg/L	109		90 - 110		
<b>QC Batch ID: B039504</b>										
Nitrite as N	B039504-BS1	LCS	0.51246	0.50000	mg/L	102		90 - 110		
<b>QC Batch ID: B039547</b>										
Dissolved Calcium	B039547-BS1	LCS	10.505	10.000	mg/L	105		85 - 115		
Dissolved Magnesium	B039547-BS1	LCS	10.129	10.000	mg/L	101		85 - 115		
Dissolved Sodium	B039547-BS1	LCS	10.097	10.000	mg/L	101		85 - 115		
Dissolved Potassium	B039547-BS1	LCS	8.9705	10.000	mg/L	89.7		85 - 115		
<b>QC Batch ID: B039606</b>										
Total Dissolved Solids @ 180 C	B039606-BS1	LCS	610.00	586.00	mg/L	104		90 - 110		
<b>QC Batch ID: B040241</b>										
Total Kjeldahl Nitrogen	B040241-BS1	LCS	2.0164	2.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B040388</b>										
Total Kjeldahl Nitrogen	B040388-BS1	LCS	1.9169	2.0000	mg/L	95.8		90 - 110		
<b>QC Batch ID: B040389</b>										
Total Phosphate	B040389-BS1	LCS	3.1330	3.0660	mg/L	102		85 - 115		
<b>QC Batch ID: B040707</b>										
Total Phosphate	B040707-BS1	LCS	2.9230	3.0660	mg/L	95.3		85 - 115		
<b>QC Batch ID: B041205</b>										
Ammonia as N	B041205-BS1	LCS	0.97610	1.0000	mg/L	97.6		90 - 110		
<b>QC Batch ID: B041206</b>										
Ammonia as N	B041206-BS1	LCS	0.97960	1.0000	mg/L	98.0		90 - 110		

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Woodland, CA 95695

Reported: 03/26/2019 12:54  
Project: Dairy Rep MP - Expanded Suite  
Project Number: Tony L. Lopes Dairy LP  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B031785</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1906326-04	195.95	193.36		mg/L	1.3		10	
Carbonate Alkalinity as CaCO3	DUP	1906326-04	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1906326-04	ND	ND		mg/L			10	
<b>QC Batch ID: B031786</b>		Used client sample: N								
Bicarbonate Alkalinity as CaCO3	DUP	1906590-03	858.94	864.42		mg/L	0.6		10	
Carbonate Alkalinity as CaCO3	DUP	1906590-03	ND	ND		mg/L			10	
Hydroxide Alkalinity as CaCO3	DUP	1906590-03	ND	ND		mg/L			10	
<b>QC Batch ID: B039133</b>		Used client sample: Y - Description: TON-MW1s, 03/01/2019 15:14								
Chloride	DUP	1906590-01	334.43	336.42		mg/L	0.6		10	
	MS	1906590-01	334.43	439.72	101.01	mg/L		104		80 - 120
	MSD	1906590-01	334.43	439.72	101.01	mg/L	0.0	104	10	80 - 120
Nitrate as N	DUP	1906590-01	25.674	25.600		mg/L	0.3		10	
	MS	1906590-01	25.674	37.109	10.101	mg/L		113		80 - 120
	MSD	1906590-01	25.674	37.042	10.101	mg/L	0.2	113	10	80 - 120
Sulfate	DUP	1906590-01	161.18	163.91		mg/L	1.7		10	
	MS	1906590-01	161.18	401.26	202.02	mg/L		119		80 - 120
	MSD	1906590-01	161.18	400.66	202.02	mg/L	0.2	119	10	80 - 120
<b>QC Batch ID: B039504</b>		Used client sample: Y - Description: TON-MW1s, 03/01/2019 15:14								
Nitrite as N	DUP	1906590-01	ND	ND		mg/L			10	
	MS	1906590-01	ND	0.52425	0.52632	mg/L		99.6		90 - 110
	MSD	1906590-01	ND	0.52938	0.52632	mg/L	1.0	101	10	90 - 110
<b>QC Batch ID: B039547</b>		Used client sample: Y - Description: TON-MW1s, 03/01/2019 15:14								
Dissolved Calcium	DUP	1906590-01	72.036	72.814		mg/L	1.1		20	
	MS	1906590-01	72.036	82.346	10.204	mg/L		101		85 - 115
	MSD	1906590-01	72.036	83.291	10.204	mg/L	1.1	110	20	85 - 115
Dissolved Magnesium	DUP	1906590-01	108.72	110.18		mg/L	1.3		20	
	MS	1906590-01	108.72	118.99	10.204	mg/L		101		85 - 115
	MSD	1906590-01	108.72	120.43	10.204	mg/L	1.2	115	20	85 - 115
Dissolved Sodium	DUP	1906590-01	313.51	321.83		mg/L	2.6		20	
	MS	1906590-01	313.51	337.44	10.204	mg/L		235		85 - 115 A03
	MSD	1906590-01	313.51	330.76	10.204	mg/L	2.0	169	20	85 - 115 A03
Dissolved Potassium	DUP	1906590-01	129.53	128.95		mg/L	0.5		20	
	MS	1906590-01	129.53	145.37	10.204	mg/L		155		85 - 115 A03
	MSD	1906590-01	129.53	139.87	10.204	mg/L	3.9	101	20	85 - 115
<b>QC Batch ID: B039606</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1906590-01	1750.0	1760.0		mg/L	0.6		10	

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500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B040241</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1906490-04	5.9097	6.0710		mg/L	2.7		20	
	MS	1906490-04	5.9097	8.0722	2.0000	mg/L		108		90 - 110
	MSD	1906490-04	5.9097	8.0373	2.0000	mg/L	0.4	106	20	90 - 110
<b>QC Batch ID: B040388</b>		Used client sample: N								
Total Kjeldahl Nitrogen	DUP	1906512-02	0.70060	0.67810		mg/L	3.3		20	
	MS	1906512-02	0.70060	2.5424	2.0000	mg/L		92.1		90 - 110
	MSD	1906512-02	0.70060	2.5499	2.0000	mg/L	0.3	92.5	20	90 - 110
<b>QC Batch ID: B040389</b>		Used client sample: N								
Total Phosphate	DUP	1906512-02	8.9380	9.4224		mg/L	5.3		20	
	MS	1906512-02	8.9380	13.416	3.0660	mg/L		146		80 - 120 Q03
	MSD	1906512-02	8.9380	12.873	3.0660	mg/L	4.1	128	20	80 - 120 Q03
<b>QC Batch ID: B040707</b>		Used client sample: N								
Total Phosphate	DUP	1907164-01	0.68407	0.65279		mg/L	4.7		20	
	MS	1907164-01	0.68407	3.6889	3.0660	mg/L		98.0		80 - 120
	MSD	1907164-01	0.68407	3.5540	3.0660	mg/L	3.7	93.6	20	80 - 120
<b>QC Batch ID: B041205</b>		Used client sample: N								
Ammonia as N	DUP	1906490-06	0.074600	0.069400		mg/L	7.2		10	J
	MS	1906490-06	0.074600	1.1696	1.1111	mg/L		98.5		90 - 110
	MSD	1906490-06	0.074600	1.1851	1.1111	mg/L	1.3	99.9	10	90 - 110
<b>QC Batch ID: B041206</b>		Used client sample: Y - Description: TON-MW8s, 03/01/2019 16:14								
Ammonia as N	DUP	1906590-05	ND	ND		mg/L			10	
	MS	1906590-05	ND	1.1568	1.1111	mg/L		104		90 - 110
	MSD	1906590-05	ND	1.0992	1.1111	mg/L	5.1	98.9	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 03/26/2019 12:54  
**Project:** Dairy Rep MP - Expanded Suite  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A03 The sample concentration was more than 4 times the spike level.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





# Attachment B3

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Laboratory Reports, 2019Q2



2019Q2

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## North Area

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Date of Report: 05/24/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Brentwood Farms

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1914778

Invoice ID: B341337

Enclosed are the results of analyses for samples received by the laboratory on 5/9/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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<b>BC Laboratories, Inc.</b> 19-14778		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		<b>Chain of Custody</b>	
<b>Report to:</b> Reduced Constituent Suite		<b>Analysis Requested</b> CHK BY: [Signature] DISTRIBUTION: [ ] SUB OUT: [ ] SHORT HOLDING TIME: [ ] Cr+6 NO <sub>2</sub> NO <sub>3</sub> OP SS DO Cl <sub>2</sub> BOB MBAS COT			
Name: Luthdorff and Scalmanini Address: 500 First Street City: Woodland State: 95695 Attn: Till Angermann		From Filtered Samples: Ammonia-N, NO <sub>3</sub> -N, Total Dissolved Solids			
Project: Dairy Representative Monitoring Program Site: Brentwood Farms Samplers Name: Edward Her Global ID - WDR100038422					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1 P6 Unpreserved
1	<del>BRE-MW1s, BRE-MW1d</del>				x
2	<del>BRE-MW2s, BRE-MW2d</del>				x
3	<del>BRE-MW3s, BRE-MW3d</del>	5/8/19	10:55	W	x
4	Field Duplicate				x
5					
6					
7					
8					
9					
10					
<b>Comments:</b> 1) Where indicated, samples shall be filtered (0.45um) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luthdorff and Scalmanini Consulting Engineers via email: llvagnano@lisce.com, rnyson@lisce.com, pdhalwal@lisce.com, jlovelis@lisce.com 4) Send invoices to Jeannette Lovelis (jlovelis@lisce.com).		Relinquished by: [Signature] Date & Time: 5/8/19 13:25 Relinquished by: [Signature] Date & Time: 5/8/19 16:00 Relinquished by: [Signature] Date & Time: 5/8/19			
(A)= Analysis (C)= Container (P)= Preservative		5.9.19 08:40			

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 19-14778

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) GSO

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify)

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments:

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 95 Container: pipe Thermometer ID: 274 Date/Time: 5-9-19 Analyst Init: [Signature]

Temperature: (A) 0.0 °C / (C) 0.1 °C

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B									
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/508/5080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: [Signature] Date/Time: 5-9-19 9:06

Sample Numbering Completed By: [Signature] Date/Time: 5-9-19 9:06

A = Actual / C = Corrected

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/24/2019 20:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Brentwood Farms  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1914778-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/09/2019 08:40
	<b>Project Number:</b>	Brentwood Farms	<b>Sampling Date:</b>	05/08/2019 10:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BRE-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/24/2019 20:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Brentwood Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1914778-01	<b>Client Sample Name:</b> Brentwood Farms, BRE-MW3s, 5/8/2019 10:55:00AM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	2.9	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	230	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/09/19 13:00	05/09/19 19:54	SAV	IC5	1	B045941
2	SM-2540C	05/14/19 16:30	05/14/19 16:30	CAD	MANUAL	2	B046179
3	EPA-350.1	05/23/19 12:05	05/23/19 15:48	JMH	SC-1	1	B047044

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/24/2019 20:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Brentwood Farms  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B045941</b>						
Nitrate as N	B045941-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046179</b>						
Total Dissolved Solids @ 180 C	B046179-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047044</b>						
Ammonia as N	B047044-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/24/2019 20:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Brentwood Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B045941</b>										
Nitrate as N	B045941-BS1	LCS	5.4020	5.0000	mg/L	108		90 - 110		
<b>QC Batch ID: B046179</b>										
Total Dissolved Solids @ 180 C	B046179-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B047044</b>										
Ammonia as N	B047044-BS1	LCS	0.95530	1.0000	mg/L	95.5		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/24/2019 20:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Brentwood Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B045941</b>		Used client sample: N								
Nitrate as N	DUP	1914784-01	0.15000	0.17200		mg/L	13.7		10	A02
	MS	1914784-01	0.15000	5.6394	5.0505	mg/L		109	80 - 120	
	MSD	1914784-01	0.15000	5.6657	5.0505	mg/L	0.5	109	10 80 - 120	
<b>QC Batch ID: B046179</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1914898-01	27700	27900		mg/L	0.7		10	
<b>QC Batch ID: B047044</b>		Used client sample: N								
Ammonia as N	DUP	1914925-02	0.060400	0.061900		mg/L	2.5		10	J
	MS	1914925-02	0.060400	1.0999	1.0000	mg/L		104	90 - 110	
	MSD	1914925-02	0.060400	1.0081	1.0000	mg/L	8.7	94.8	10 90 - 110	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/24/2019 20:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Brentwood Farms  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.





Date of Report: 05/28/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Creekside Silveira Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1914590

Invoice ID: B341463

Enclosed are the results of analyses for samples received by the laboratory on 5/8/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1914590

Samples were filtered through a 0.45 micron filter prior to analysis.



# BC Laboratories, Inc.

Environmental Testing Laboratory Since 1949

## BC Laboratories, Inc.

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

## Chain of Custody

19-14590

### Report to:

Reduced Constituent Suite

### Analysis Requested

Name: Luthdorff and Scalmanini  
 Address: 500 First Street  
 City: Woodland  
 State: 95895  
 CA: Till Angermann  
 Attn: Till Angermann

Project: Dairy Representative Monitoring Program  
 Site: Creekside Silvera Dairy  
 Samplers Name: Jeff Edward Hew  
 Global ID - WDR100038297

From Filtered Sample:  
 Ammonia-N, NO3-N,  
 Total Dissolved Solids

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20		
1	CRE-MW1s, CRE-MW1d	5/7/19	10:20	W																						
2	CRE-MW2s, CRE-MW2d		10:55	W																						
3	CRE-MW3s, CRE-MW3d		09:45	W																						
4	Field Duplicate			W																						
5																										
6																										
7																										
8																										
9																										
10																										

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45um) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luthdorff and Scalmanini Consulting Engineers via email: jluthdorff@lsc.com, rscalmanini@lsc.com, pdhishelwa@lsc.com, jlovelis@lsc.com  
 4) Send invoices to Jeanette Lovelis (jlovelis@lsc.com).

Relinquished by: (Signature)  
 Relinquished by: (Signature)

Received by: (Signature)  
 Received by: (Signature)  
 Date & Time: 5/7/19 15:00  
 Date & Time: 5/8/19 09:00

**SHORT HOLDING TIME**  
 Cr+8 NO<sub>2</sub> NO<sub>3</sub> OP S9  
 DO Cl BOD MBAS COI

CHK BY: [Signature]  
 DISTRIBUTION  
 SUB OUT: [ ]



# Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-14590

SHIPPING INFORMATION		SHIPPING CONTAINER	FREE LIQUID
Fed Ex <input type="checkbox"/>	UPS <input type="checkbox"/>	Ice Chest <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
Ontrac <input type="checkbox"/>	Hand Delivery <input type="checkbox"/>	None <input type="checkbox"/> Box <input type="checkbox"/>	W / S
BC Lab Field Service <input type="checkbox"/>	Other (Specify) <u>950</u>	Other <input type="checkbox"/> (Specify) _____	

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals Ice Chest  Containers  None  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received YES  NO  Emissivity: 95 Container: JPL Thermometer ID: 274 Date/Time: 5/8/19 Analyst Init: JD 19:00

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B	B						
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: Sample Numbering Completed By: [Signature] Date/Time: 5/8/19 1105 Rev 21 05/23/2016

A = Actual / C = Corrected [Signature]



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1914590-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/08/2019 09:00
	<b>Project Number:</b> Creekside Silveira Dairy	<b>Sampling Date:</b> 05/07/2019 10:20
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> CRE-MW1s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of BTST	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1914590-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/08/2019 09:00
	<b>Project Number:</b> Creekside Silveira Dairy	<b>Sampling Date:</b> 05/07/2019 10:55
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> CRE-MW2s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of BTST	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1914590-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/08/2019 09:00
	<b>Project Number:</b> Creekside Silveira Dairy	<b>Sampling Date:</b> 05/07/2019 09:45
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> CRE-MW3s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of BTST	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1914590-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/08/2019 09:00
	<b>Project Number:</b> Creekside Silveira Dairy	<b>Sampling Date:</b> 05/07/2019 00:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Field Duplicate	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of BTST	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1914590-01	<b>Client Sample Name:</b> Creekside Silveira Dairy, CRE-MW1s, 5/7/2019 10:20:00AM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	58	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	990	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.11	mg/L	0.20	0.050	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/08/19 15:00	05/08/19 19:56		KEB	IC5	5	B045831
2	SM-2540C	05/10/19 15:30	05/10/19 15:30		CAD	MANUAL	5	B045950
3	EPA-350.1	05/22/19 11:00	05/23/19 15:05		JMH	SC-1	1	B046970

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1914590-02	<b>Client Sample Name:</b> Creekside Silveira Dairy, CRE-MW2s, 5/7/2019 10:55:00AM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	17	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	560	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/08/19 15:00	05/08/19 18:26	KEB	IC5	1	B045831
2	SM-2540C	05/10/19 15:30	05/10/19 15:30	CAD	MANUAL	3.333	B045950
3	EPA-350.1	05/22/19 11:00	05/23/19 15:08	JMH	SC-1	1	B046970

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1914590-03	<b>Client Sample Name:</b> Creekside Silveira Dairy, CRE-MW3s, 5/7/2019 9:45:00AM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	5.8	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.077	mg/L	0.20	0.050	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/08/19 15:00	05/08/19 19:20		KEB	IC5	2	B045831
2	SM-2540C	05/10/19 15:30	05/10/19 15:30		CAD	MANUAL	5	B045950
3	EPA-350.1	05/22/19 11:00	05/23/19 15:10		JMH	SC-1	1	B046970

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1914590-04	<b>Client Sample Name:</b> Creekside Silveira Dairy, Field Duplicate, 5/7/2019 12:00:00AM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	17	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	580	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.050	mg/L	0.20	0.050	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/08/19 15:00	05/08/19 19:38		KEB	IC5	1	B045831
2	SM-2540C	05/10/19 15:30	05/10/19 15:30		CAD	MANUAL	3.333	B045950
3	EPA-350.1	05/22/19 11:00	05/23/19 15:12		JMH	SC-1	1	B046970

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B045831</b>						
Nitrate as N	B045831-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B045950</b>						
Total Dissolved Solids @ 180 C	B045950-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B046970</b>						
Ammonia as N	B046970-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B045831</b>										
Nitrate as N	B045831-BS1	LCS	5.4520	5.0000	mg/L	109		90 - 110		
<b>QC Batch ID: B045950</b>										
Total Dissolved Solids @ 180 C	B045950-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B046970</b>										
Ammonia as N	B046970-BS1	LCS	0.93910	1.0000	mg/L	93.9		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B045831</b>		Used client sample: N								
Nitrate as N	DUP	1914589-01	19.618	19.620		mg/L	0.0		10	
	MS	1914589-01	19.618	30.481	10.101	mg/L		108		80 - 120
	MSD	1914589-01	19.618	30.271	10.101	mg/L	0.7	105	10	80 - 120
<b>QC Batch ID: B045950</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1914588-01	745.00	770.00		mg/L	3.3		10	
<b>QC Batch ID: B046970</b>		Used client sample: Y - Description: CRE-MW1s, 05/07/2019 10:20								
Ammonia as N	DUP	1914590-01	0.10960	0.092000		mg/L	17.5		10	J,A02
	MS	1914590-01	0.10960	1.1316	1.1111	mg/L		92.0		90 - 110
	MSD	1914590-01	0.10960	1.2041	1.1111	mg/L	6.2	98.5	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Creekside Silveira Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 05/28/2019

Till Angermann

Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Client Project: MTSJ Dairy  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1914589  
Invoice ID: B341462

Enclosed are the results of analyses for samples received by the laboratory on 5/8/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1914589

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

Chain of Custody

19-14589

Report to:

Reduced Constituent Suite

Analysis Requested

Project: Dairy Representative Monitoring Program

Site: MTSJ Dairy

Samplers Name: Edward Her

Global ID - WDR100039114

From Filtered Sample:  
Ammonia-N, NO3-N,  
Total Dissolved Solids

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl/Pe Unpreserved	OP	SS	CHK BY	DATE	Received By:	Date & Time
1	MTS-MW1	5/7/19	1240	W	x					MS	5/7/19 1515
2	MTS-MW2, MTS-MW2d		1305		x						
3	MTS-MW3, MTS-MW3d		1330		x						
4	Field Duplicate				x						
5											
6											
7											
8											
9											
10											

Relinquished by: (Signature) [Signature]

Relinquished by: (Signature) [Signature]

Relinquished by: (Signature) [Signature]

Received By: [Signature] Date & Time: 5/7/19 1515

Received by: [Signature] Date & Time: 5/7/19 1530

Received By: [Signature] Date & Time: 5-8-19 09:00

- Comments:**
- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
  - Lab reports shall identify sampler wells exactly as shown on this CoC.
  - Send lab reports to Luthoff and Scalamini Consulting Engineers via email: llavagnne@lscce.com, rbyson@lscce.com, patwalk@lscce.com, jlovelis@lscce.com
  - Send invoices to Jeanette Lovels (jlovelis@lscce.com).

(A)= Analysis (C)= Container (P)= Preservative

**SHORT HOLDING TIME**

Cl+e ND, NO<sub>2</sub>

DO Cl<sub>2</sub> BOD MBAS GOT

CHK BY [Signature]

DISTRIBUION [Signature]

SUB OUT [Signature]



**COOLER RECEIPT FORM**

Page 1 Of 1

Submission #: 19-14589A

<b>SHIPPING INFORMATION</b>		<b>SHIPPING CONTAINER</b>	<b>FREE LIQUID</b>
Fed Ex <input type="checkbox"/>	UPS <input type="checkbox"/>	Ice Chest <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
BC Lab Field Service <input type="checkbox"/>	Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/>	Other <input type="checkbox"/> (Specify) <u>ASO</u>	W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals: Ice Chest  Containers  None  Comments:

Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO

Emissivity: 95 Container: plp Thermometer ID: 274 Date/Time: 5.8.19

Temperature: (A) 0.0 °C / (C) 0.1 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B							
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8030										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: [Signature] Date/Time: 5/8/19 1105

1 = Actual / C = Corrected

Rev 21 05/23/2016  
IS:\WPDoc\WordPerfect\LAB\_DOC\FORMS\SISAMR2.Crv 200

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1914589-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/08/2019 09:00
	<b>Project Number:</b>	MTSJ Dairy	<b>Sampling Date:</b>	05/07/2019 12:40
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MTS-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1914589-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/08/2019 09:00
	<b>Project Number:</b>	MTSJ Dairy	<b>Sampling Date:</b>	05/07/2019 13:05
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MTS-MW2d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1914589-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/08/2019 09:00
	<b>Project Number:</b>	MTSJ Dairy	<b>Sampling Date:</b>	05/07/2019 13:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MTS-MW3d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTST	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1914589-01	<b>Client Sample Name:</b> MTSJ Dairy, MTS-MW1, 5/7/2019 12:40:00PM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	20	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	490	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.069	mg/L	0.20	0.050	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/08/19 15:00	05/08/19 16:21		KEB	IC5	2	B045831
2	SM-2540C	05/11/19 11:30	05/11/19 11:30		CAD	MANUAL	3.333	B045988
3	EPA-350.1	05/22/19 11:30	05/23/19 15:30		JMH	SC-1	1	B046979

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1914589-02	<b>Client Sample Name:</b> MTSJ Dairy, MTS-MW2d, 5/7/2019 1:05:00PM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	22	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	490	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.057	mg/L	0.20	0.050	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/08/19 15:00	05/08/19 17:33		KEB	IC5	2	B045831
2	SM-2540C	05/11/19 11:30	05/11/19 11:30		CAD	MANUAL	3.333	B045988
3	EPA-350.1	05/22/19 11:30	05/23/19 15:31		JMH	SC-1	1	B046979

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1914589-03	<b>Client Sample Name:</b> MTSJ Dairy, MTS-MW3d, 5/7/2019 1:30:00PM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	31	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	530	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.050	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/08/19 15:00	05/08/19 17:50		KEB	IC5	2	B045831
2	SM-2540C	05/11/19 11:30	05/11/19 11:30		CAD	MANUAL	3.333	B045988
3	EPA-350.1	05/22/19 11:30	05/23/19 15:33		JMH	SC-1	1	B046979

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B045831</b>						
Nitrate as N	B045831-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B045988</b>						
Total Dissolved Solids @ 180 C	B045988-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B046979</b>						
Ammonia as N	B046979-BLK1	ND	mg/L	0.20	0.050	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B045831</b>										
Nitrate as N	B045831-BS1	LCS	5.4520	5.0000	mg/L	109		90 - 110		
<b>QC Batch ID: B045988</b>										
Total Dissolved Solids @ 180 C	B045988-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B046979</b>										
Ammonia as N	B046979-BS1	LCS	0.98320	1.0000	mg/L	98.3		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B045831</b>		Used client sample: Y - Description: MTS-MW1, 05/07/2019 12:40								
Nitrate as N	DUP	1914589-01	19.618	19.620		mg/L	0.0		10	
	MS	1914589-01	19.618	30.481	10.101	mg/L		108		80 - 120
	MSD	1914589-01	19.618	30.271	10.101	mg/L	0.7	105	10	80 - 120
<b>QC Batch ID: B045988</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1914455-02	1880.0	1900.0		mg/L	1.1		10	
<b>QC Batch ID: B046979</b>		Used client sample: N								
Ammonia as N	DUP	1915857-02	0.21970	0.22190		mg/L	1.0		10	
	MS	1915857-02	0.21970	1.2458	1.1111	mg/L		92.3		90 - 110
	MSD	1915857-02	0.21970	1.3828	1.1111	mg/L	10.4	105	10	90 - 110 Q02

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 05/28/2019 13:29  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** MTSJ Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q02 Matrix spike precision is not within the control limits.



## South Area

---





Date of Report: 06/03/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Aukeman Farms

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1915482

Invoice ID: B342181

Enclosed are the results of analyses for samples received by the laboratory on 5/14/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915482

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b> 19-15482 4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		<b>Chain of Custody</b>			
<b>Report to:</b> Reduced Constituent Suite					
<b>Analysis Requested</b>					
Name: Luhdorff and Scalmani Address: 500 First Street City: Woodland State: 95695 CA Attn: Till Angermann		From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids			
Project: Dairy Representative Monitoring Program Site: Aukeman Farms Samplers Name: <b>Tory Dairi</b> Global ID - WDR100038978					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qt Pp Unpreserved
-1	AUK-MW1	5-14-19	1725	W	x
-2	AUK-MW2	5-14-19	1605	W	x
-3	AUK-MW3	5-14-19	1645	W	x
-4	Ap-2 Field Duplicate	5-14-19	1700	W	x
5					
6					
7					
8					
9					
10					

SHORT HOLDING TIME  
 Cr<sup>6</sup> NO<sub>2</sub> (NO) OP SS  
 DO Cl<sub>2</sub> BOD MBAS COT

CHKRY DISTRIBUTION  
 SUB-OUT

Relinquished by: (Signature)	Received By: <i>[Signature]</i>	Date & Time: 5-14-19
Relinquished by: (Signature)	Received by: <i>[Signature]</i>	Date & Time: 5-14-19 2230
Relinquished by: (Signature)	Received By:	Date & Time:

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhdorff and Scalmani Consulting Engineers via email: llavagnire@lscce.com, rbryson@lscce.com, pdhalliwell@lscce.com, jlovelis@lscce.com  
 4) Send invoices to Jeanette Lovell (jlovelis@lscce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-15482

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact: Yes  No  Intact: Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: YE Thermometer ID: 208 Date/Time: 5/14/2016

Temperature: (A) 3.1 °C / (C) 3.0 °C Analyst Init: SMR

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B	B						
PT TOTAL SULFIDE										
2oz NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
45ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 508/608/6060										
QT EPA 515.1/E150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml RPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 6015M										
QT RPA 6270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: SMR Date/Time: 5-14-16 2305 Rev 21 05/23/2016

A = Actual / C = Corrected

(S://WPDoc/WerPerfec/LAB\_DOC/FORMS/SAVRECrev 21)

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1915482-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/14/2019 22:30
	<b>Project Number:</b> Aukeman Farms	<b>Sampling Date:</b> 05/14/2019 17:25
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> AUK-MW1	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Tony Dalri of BTST	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1915482-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/14/2019 22:30
	<b>Project Number:</b> Aukeman Farms	<b>Sampling Date:</b> 05/14/2019 16:05
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> AUK-MW2	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Tony Dalri of BTST	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1915482-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/14/2019 22:30
	<b>Project Number:</b> Aukeman Farms	<b>Sampling Date:</b> 05/14/2019 16:45
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> AUK-MW3	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Tony Dalri of BTST	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1915482-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/14/2019 22:30
	<b>Project Number:</b> Aukeman Farms	<b>Sampling Date:</b> 05/14/2019 12:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Dup-2 Field Duplicate	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Tony Dalri of BTST	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915482-01	<b>Client Sample Name:</b> Aukeman Farms, AUK-MW1, 5/14/2019 5:25:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	54	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 23:00	05/15/19 11:07		SAV	IC2	5	B046306
2	SM-2540C	05/16/19 15:00	05/16/19 15:00		CAD	MANUAL	5	B046434
3	EPA-350.1	05/29/19 10:00	05/30/19 12:22		JMH	SC-1	1	B047419

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915482-02	<b>Client Sample Name:</b> Aukeman Farms, AUK-MW2, 5/14/2019 4:05:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	71	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 23:00	05/15/19 11:28		SAV	IC2	5	B046306
2	SM-2540C	05/16/19 15:00	05/16/19 15:00		CAD	MANUAL	5	B046434
3	EPA-350.1	05/29/19 10:00	05/30/19 12:18		JMH	SC-1	1	B047419

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500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915482-03	<b>Client Sample Name:</b> Aukeman Farms, AUK-MW3, 5/14/2019 4:45:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	33	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 23:00	05/15/19 11:48		SAV	IC2	5	B046306
2	SM-2540C	05/16/19 15:00	05/16/19 15:00		CAD	MANUAL	5	B046434
3	EPA-350.1	05/29/19 10:00	05/30/19 12:23		JMH	SC-1	1	B047419

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500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915482-04	<b>Client Sample Name:</b> Aukeman Farms, Dup-2 Field Duplicate, 5/14/2019 12:00:00PM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	47	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 23:00	05/15/19 12:09		SAV	IC2	5	B046306
2	SM-2540C	05/16/19 15:00	05/16/19 15:00		CAD	MANUAL	5	B046434
3	EPA-350.1	05/29/19 10:00	05/30/19 12:25		JMH	SC-1	1	B047419

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Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046306</b>						
Nitrate as N	B046306-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046434</b>						
Total Dissolved Solids @ 180 C	B046434-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047419</b>						
Ammonia as N	B047419-BLK1	ND	mg/L	0.20	0.067	

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Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046306</b>										
Nitrate as N	B046306-BS1	LCS	4.9350	5.0000	mg/L	98.7		90 - 110		
<b>QC Batch ID: B046434</b>										
Total Dissolved Solids @ 180 C	B046434-BS1	LCS	615.00	586.00	mg/L	105		90 - 110		
<b>QC Batch ID: B047419</b>										
Ammonia as N	B047419-BS1	LCS	0.94690	1.0000	mg/L	94.7		90 - 110		

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500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B046306</b>		Used client sample: N								
Nitrate as N	DUP	1915468-04	7.9570	8.1380		mg/L	2.2		10	
	MS	1915468-04	7.9570	12.982	5.0505	mg/L		99.5		80 - 120
	MSD	1915468-04	7.9570	12.794	5.0505	mg/L	1.5	95.8	10	80 - 120
<b>QC Batch ID: B046434</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1915456-01	24200	24200		mg/L	0		10	
<b>QC Batch ID: B047419</b>		Used client sample: Y - Description: AUK-MW2, 05/14/2019 16:05								
Ammonia as N	DUP	1915482-02	ND	ND		mg/L			10	
	MS	1915482-02	ND	1.2307	1.1111	mg/L		111		90 - 110 Q03
	MSD	1915482-02	ND	1.2318	1.1111	mg/L	0.1	111	10	90 - 110 Q03

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Aukeman Farms  
**Project Manager:** Till Angermann

**Notes And Definitions**

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.



Date of Report: 06/03/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Dairyland Farms

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1915484

Invoice ID: B342183

Enclosed are the results of analyses for samples received by the laboratory on 5/14/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915484

Samples were filtered through a 0.45 micron filter prior to analysis.







BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-15484

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: YE Thermometer ID: 208 Date/Time: 5/14/2016 2230

Temperature: (A) 3.1 °C / (C) 3.0 °C Analyst Init: SML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A								
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B								
PT TOTAL SULFIDE										
2oz NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/508/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: SML Date/Time: 5-14-16 2305 Rev 21 05/23/2016



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915484-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	Dairyland Farms	<b>Sampling Date:</b>	05/14/2019 09:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DLF-MW5A	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915484-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	Dairyland Farms	<b>Sampling Date:</b>	05/14/2019 09:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DLF-MW6C	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915484-01	<b>Client Sample Name:</b> Dairyland Farms, DLF-MW5A, 5/14/2019 9:55:00AM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	6.3	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	200	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 17:00	05/15/19 01:58		SAV	IC5	5	B046303
2	SM-2540C	05/16/19 16:00	05/16/19 16:00		CAD	MANUAL	2	B046437
3	EPA-350.1	05/29/19 10:00	05/30/19 12:29		JMH	SC-1	1	B047419

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915484-02	<b>Client Sample Name:</b> Dairyland Farms, DLF-MW6C, 5/14/2019 9:10:00AM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	7.7	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	230	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 17:00	05/15/19 03:28		SAV	IC5	5	B046303
2	SM-2540C	05/16/19 16:00	05/16/19 16:00		CAD	MANUAL	2	B046437
3	EPA-350.1	05/29/19 10:00	05/30/19 12:30		JMH	SC-1	1	B047419

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046303</b>						
Nitrate as N	B046303-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046437</b>						
Total Dissolved Solids @ 180 C	B046437-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047419</b>						
Ammonia as N	B047419-BLK1	ND	mg/L	0.20	0.067	

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Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046303</b>										
Nitrate as N	B046303-BS1	LCS	4.8350	5.0000	mg/L	96.7		90 - 110		
<b>QC Batch ID: B046437</b>										
Total Dissolved Solids @ 180 C	B046437-BS1	LCS	605.00	586.00	mg/L	103		90 - 110		
<b>QC Batch ID: B047419</b>										
Ammonia as N	B047419-BS1	LCS	0.94690	1.0000	mg/L	94.7		90 - 110		

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Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B046303</b>		Used client sample: Y - Description: DLF-MW6C, 05/14/2019 09:10								
Nitrate as N	DUP	1915484-02	7.6550	7.7900		mg/L	1.7		10	
	MS	1915484-02	7.6550	33.288	25.253	mg/L		102		80 - 120
	MSD	1915484-02	7.6550	32.399	25.253	mg/L	2.7	98.0	10	80 - 120
<b>QC Batch ID: B046437</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1915459-01	34800	34400		mg/L	1.2		10	
<b>QC Batch ID: B047419</b>		Used client sample: N								
Ammonia as N	DUP	1915482-02	ND	ND		mg/L			10	
	MS	1915482-02	ND	1.2307	1.1111	mg/L		111		90 - 110 Q03
	MSD	1915482-02	ND	1.2318	1.1111	mg/L	0.1	111	10	90 - 110 Q03

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500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Dairyland Farms  
**Project Manager:** Till Angermann

**Notes And Definitions**

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.

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Date of Report: 06/11/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Giacomazzi Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916476

Invoice ID: B343114

Enclosed are the results of analyses for samples received by the laboratory on 5/22/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916476

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		Chain of Custody	
19-16476		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911	
Report to:			
Reduced Constituent Suite			
Project: Dairy Representative Monitoring Program			
Site: Giacomazzi Dairy			
Samplers Name: Edward Hew			
Global ID - WDR100037884			
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled
-1	ZZ1-MW1A, ZZ1-MW1B ZZ1-MW1C, ZZ1-MW1D	5/22/19	1525
-2	ZZ1-MW2A, ZZ1-MW2B ZZ1-MW2C, ZZ1-MW2D	1755	1730
-3	ZZ1-MW3A, ZZ1-MW3B ZZ1-MW3C, ZZ1-MW3D	1730	1620
-4	ZZ1-MW4A, ZZ1-MW4B ZZ1-MW4C, ZZ1-MW4D	1555	1700
-5	ZZ1-MW5A, ZZ1-MW5B ZZ1-MW5C, ZZ1-MW5D	1700	1830
-6	ZZ1-MW6A, ZZ1-MW6B ZZ1-MW6C, ZZ1-MW6D	1555	1700
-7	ZZ1-MW7A, ZZ1-MW7B ZZ1-MW7C, ZZ1-MW7D	1700	1830
-8	ZZ1-MW8A, ZZ1-MW8B ZZ1-MW8C, ZZ1-MW8D	1700	1700
9	Field Duplicate		
10			
11			

  

Analysis Requested		From Filtered Sample:	
Ammonia-N, NO3-N	<input checked="" type="checkbox"/>	Ammonia-N, NO3-N	<input checked="" type="checkbox"/>
Total Dissolved Solids	<input checked="" type="checkbox"/>	Total Dissolved Solids	<input checked="" type="checkbox"/>

  

Matrix	Time Sampled	Cl/Pe Unobserved
W	1525	<input checked="" type="checkbox"/>
	1730	<input checked="" type="checkbox"/>
	1620	<input checked="" type="checkbox"/>
	1700	<input checked="" type="checkbox"/>
	1700	<input checked="" type="checkbox"/>
	1830	<input checked="" type="checkbox"/>
	1700	<input checked="" type="checkbox"/>

  

Received By:	Date & Time
<i>[Signature]</i>	5/22/19 20:30
<i>[Signature]</i>	5/22/19 22:15

  

Received By:	Date & Time
<i>[Signature]</i>	5/22/19 22:15

  

Comments:

- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Luthoff and Scalmani Consulting Engineers via email: llavagnino@lsc.com, rmyson@lsc.com, pdhalik@lsc.com, jlovelis@lsc.com
- Send invoices to Jeanette Lovelis (jlovelis@lsc.com).

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-16476

SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
--	--	--	--	--

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.98 Container: PE Thermometer ID: 108 Date/Time: 5/22/2015  
 Temperature: (A) 3.3 °C (C) 3.2 °C Analyst Init: GML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B	B	B	B	B	B		
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 518/508/5080										
QT EPA 515.1/6150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: GML Date/Time: 5-22-10 2246 Rev 21 05/23/2016



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1916476-01	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b>	Giacomazzi Dairy	<b>Sampling Date:</b> 05/22/2019 15:25
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	ZZI-MW1D	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b> Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916476-02	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b>	Giacomazzi Dairy	<b>Sampling Date:</b> 05/22/2019 17:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	ZZI-MW2C	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b> Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916476-03	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b>	Giacomazzi Dairy	<b>Sampling Date:</b> 05/22/2019 17:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	ZZI-MW3B	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b> Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916476-04	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b>	Giacomazzi Dairy	<b>Sampling Date:</b> 05/22/2019 16:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	ZZI-MW5D	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b> Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916476-05	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b>	Giacomazzi Dairy	<b>Sampling Date:</b> 05/22/2019 15:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	ZZI-MW6D	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b> Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916476-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Giacomazzi Dairy	<b>Sampling Date:</b>	05/22/2019 17:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ZZI-MW7D	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916476-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Giacomazzi Dairy	<b>Sampling Date:</b>	05/22/2019 18:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ZZI-MW9D	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916476-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Giacomazzi Dairy	<b>Sampling Date:</b>	05/22/2019 12:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916476-01	<b>Client Sample Name:</b> Giacomazzi Dairy, ZZI-MW1D, 5/22/2019 3:25:00PM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	1.7	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	290	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	0.076	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 08:36		SAV	IC1	1	B047076
2	SM-2540C	05/29/19 14:00	05/29/19 14:00		CAD	MANUAL	2	B047435
3	EPA-350.1	06/06/19 14:30	06/07/19 10:49		JMH	SC-1	1	B048160

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Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916476-02	<b>Client Sample Name:</b> Giacomazzi Dairy, ZZI-MW2C, 5/22/2019 5:55:00PM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	1.7	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	240	mg/L	20	10	SM-2540C	ND	Z1	2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 10:00		SAV	IC1	1	B047076
2	SM-2540C	06/06/19 14:00	06/06/19 14:00		CAD	MANUAL	2	B048093
3	EPA-350.1	06/06/19 14:30	06/07/19 10:53		JMH	SC-1	1	B048160

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Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916476-03	<b>Client Sample Name:</b> Giacomazzi Dairy, ZZI-MW3B, 5/22/2019 5:30:00PM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	13	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	570	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 10:22		SAV	IC1	1	B047076
2	SM-2540C	05/29/19 14:00	05/29/19 14:00		CAD	MANUAL	3.333	B047435
3	EPA-350.1	06/06/19 14:30	06/07/19 10:54		JMH	SC-1	1	B048160

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500 First Street  
Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916476-04	<b>Client Sample Name:</b> Giacomazzi Dairy, ZZI-MW5D, 5/22/2019 4:20:00PM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	46	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.097	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 13:31	SAV	IC1	5	B047076
2	SM-2540C	05/29/19 14:00	05/29/19 14:00	CAD	MANUAL	5	B047435
3	EPA-350.1	06/06/19 14:30	06/07/19 10:54	JMH	SC-1	1	B048160

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500 First Street  
Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916476-05	<b>Client Sample Name:</b> Giacomazzi Dairy, ZZI-MW6D, 5/22/2019 3:55:00PM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	42	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.092	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 13:52	SAV	IC1	5	B047076
2	SM-2540C	05/29/19 14:00	05/29/19 14:00	CAD	MANUAL	10	B047435
3	EPA-350.1	06/06/19 14:30	06/07/19 10:56	JMH	SC-1	1	B048160

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916476-06	<b>Client Sample Name:</b> Giacomazzi Dairy, ZZI-MW7D, 5/22/2019 5:00:00PM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	13	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	670	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.070	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 12:07		SAV	IC1	2	B047076
2	SM-2540C	05/29/19 14:00	05/29/19 14:00		CAD	MANUAL	3.333	B047435
3	EPA-350.1	06/06/19 14:30	06/07/19 10:58		JMH	SC-1	1	B048160

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500 First Street  
Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916476-07	<b>Client Sample Name:</b> Giacomazzi Dairy, ZZI-MW9D, 5/22/2019 6:30:00PM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	2.4	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	250	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 12:28		SAV	IC1	1	B047076
2	SM-2540C	05/29/19 14:00	05/29/19 14:00		CAD	MANUAL	2	B047435
3	EPA-350.1	06/06/19 14:30	06/07/19 11:00		JMH	SC-1	1	B048160

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Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916476-08	<b>Client Sample Name:</b> Giacomazzi Dairy, Field Duplicate, 5/22/2019 12:00:00PM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	2.4	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	260	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	0.074	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 12:49		SAV	IC1	1	B047076
2	SM-2540C	05/29/19 14:00	05/29/19 14:00		CAD	MANUAL	2	B047435
3	EPA-350.1	06/06/19 14:30	06/07/19 11:00		JMH	SC-1	1	B048160

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Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047076</b>						
Nitrate as N	B047076-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047435</b>						
Total Dissolved Solids @ 180 C	B047435-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048093</b>						
Total Dissolved Solids @ 180 C	B048093-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048160</b>						
Ammonia as N	B048160-BLK1	ND	mg/L	0.20	0.067	

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Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047076</b>										
Nitrate as N	B047076-BS1	LCS	5.2020	5.0000	mg/L	104		90 - 110		
<b>QC Batch ID: B047435</b>										
Total Dissolved Solids @ 180 C	B047435-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B048093</b>										
Total Dissolved Solids @ 180 C	B048093-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B048160</b>										
Ammonia as N	B048160-BS1	LCS	1.0142	1.0000	mg/L	101		90 - 110		

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Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B047076</b>		Used client sample: Y - Description: ZZI-MW1D, 05/22/2019 15:25								
Nitrate as N	DUP	1916476-01	1.7450	1.6290		mg/L	6.9		10	
	MS	1916476-01	1.7450	6.8667	5.0505	mg/L		101	80 - 120	
	MSD	1916476-01	1.7450	6.8818	5.0505	mg/L	0.2	102	10	80 - 120
<b>QC Batch ID: B047435</b>		Used client sample: Y - Description: ZZI-MW5D, 05/22/2019 16:20								
Total Dissolved Solids @ 180 C	DUP	1916476-04	1075.0	1060.0		mg/L	1.4		10	
<b>QC Batch ID: B048093</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1917966-01	1670.0	1710.0		mg/L	2.4		10	
<b>QC Batch ID: B048160</b>		Used client sample: Y - Description: ZZI-MW1D, 05/22/2019 15:25								
Ammonia as N	DUP	1916476-01	0.075900	ND		mg/L			10	
	MS	1916476-01	0.075900	1.1824	1.1111	mg/L		99.6	90 - 110	
	MSD	1916476-01	0.075900	1.2024	1.1111	mg/L	1.7	101	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/11/2019 16:50  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Giacomazzi Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Z1 The TDS was reanalyzed past the holding time - initial result was not comparable to the EC.





Date of Report: 06/03/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: J & A Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1915483

Invoice ID: B342182

Enclosed are the results of analyses for samples received by the laboratory on 5/14/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915483

Samples were filtered through a 0.45 micron prior to analysis.



**Chain of Custody**

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

**Analysis Requested**

SHORT HOLDING TIME  
DO Cl<sub>2</sub> BOD MBAS COC  
NO<sub>2</sub> NO<sub>3</sub> OP SS

CHK-BY: SAV DISTRIBUTION: IN  
SUB OUT:

From Filtered Sample:  
Ammonia-N, NO<sub>3</sub>-N,  
Total Dissolved Solids

**Report to:**  
Reduced Constituent Suite

**BC Laboratories, Inc.**  
19-15483

Name: Luhdorff and Scalmanini  
Address: 500 First Street  
City: Woodland  
State: 95695  
Attn: Till Angermann

Project: Dairy Representative Monitoring Program  
Site: J & A Dairy  
Samplers Name: Tony Dalri  
Global ID - WDR100038688

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qc Pe Unpreserved
1	JAB-MW77				x
2	JAD-MW4E				x
3	JAB-MW3				x
4	JAB-MW4s, JAD-MW4d -1	5-14-19	1500	W	x
5	JAD-MW5s, JAB-MW6d -2	5-14-19	1415	W	x
6	JAD-MW4s, JAD-MW6d -3	5-14-19	1330	W	x
7	JAB-MW7s, JAB-MW7d				x
8	-Field-Duplicate				x
9					
10					

**Comments:**  
1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavegrina@lscce.com, brayson@lscce.com, pthalwal@lscce.com, jlowells@lscce.com  
4) Send invoices to Jeanette Lovells (jlowells@lscce.com)

(A)= Analysis (C)= Containter (P)= Preservative

Received By: [Signature] Date & Time: 5-14-19  
Received By: [Signature] Date & Time: 5-14-19 2230  
Received By: [Signature] Date & Time: 5-14-19 2230

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# Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-15483

SHIPPING INFORMATION		SHIPPING CONTAINER		FREE LIQUID
Fed Ex <input type="checkbox"/>	UPS <input type="checkbox"/>	Ontrac <input type="checkbox"/>	Hand Delivery <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
BC Lab Field Service <input checked="" type="checkbox"/>		Other <input type="checkbox"/> (Specify) _____		W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO

Emissivity: 0.98 Container: YE Thermometer ID: 208 Date/Time: 5/14/2016

Temperature: (A) 3.1 °C / (C) 3.0 °C Analyst Init: SMR

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B							
PT TOTAL SULFIDE										
2oz NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 504GDE/3080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 543										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FEROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: WMC Date/Time: 5-14-16 2305 Rev 21 05/23/2016

A = Actual / C = Corrupted

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915483-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	J & A Dairy	<b>Sampling Date:</b>	05/14/2019 15:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	JAD-MW4d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915483-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	J & A Dairy	<b>Sampling Date:</b>	05/14/2019 14:15
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	JAD-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915483-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	J & A Dairy	<b>Sampling Date:</b>	05/14/2019 13:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	JAD-MW6d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915483-01	<b>Client Sample Name:</b> J & A Dairy, JAD-MW4d, 5/14/2019 3:00:00PM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	12	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	560	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/14/19 22:00	05/15/19 11:32	SAV	IC1	1	B046304
2	SM-2540C	05/16/19 16:00	05/16/19 16:00	CAD	MANUAL	3.333	B046436
3	EPA-350.1	05/29/19 10:00	05/30/19 12:27	JMH	SC-1	1	B047419

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500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915483-02	<b>Client Sample Name:</b> J & A Dairy, JAD-MW5s, 5/14/2019 2:15:00PM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	15	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	630	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 22:00	05/15/19 11:53		SAV	IC1	2	B046304
2	SM-2540C	05/16/19 16:00	05/16/19 16:00		CAD	MANUAL	3.333	B046436
3	EPA-350.1	05/29/19 10:00	05/30/19 12:27		JMH	SC-1	1	B047419

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915483-03	<b>Client Sample Name:</b> J & A Dairy, JAD-MW6d, 5/14/2019 1:30:00PM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	18	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	620	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 22:00	05/15/19 12:14		SAV	IC1	2	B046304
2	SM-2540C	05/16/19 16:00	05/16/19 16:00		CAD	MANUAL	3.333	B046436
3	EPA-350.1	05/29/19 10:00	05/30/19 12:29		JMH	SC-1	1	B047419

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046304</b>						
Nitrate as N	B046304-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046436</b>						
Total Dissolved Solids @ 180 C	B046436-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047419</b>						
Ammonia as N	B047419-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046304</b>										
Nitrate as N	B046304-BS1	LCS	4.7820	5.0000	mg/L	95.6		90 - 110		
<b>QC Batch ID: B046436</b>										
Total Dissolved Solids @ 180 C	B046436-BS1	LCS	570.00	586.00	mg/L	97.3		90 - 110		
<b>QC Batch ID: B047419</b>										
Ammonia as N	B047419-BS1	LCS	0.94690	1.0000	mg/L	94.7		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B046304</b>		Used client sample: N								
Nitrate as N	DUP	1915470-01	10.656	10.707		mg/L	0.5		10	
	MS	1915470-01	10.656	15.503	5.0505	mg/L		96.0		80 - 120
	MSD	1915470-01	10.656	15.668	5.0505	mg/L	1.1	99.2	10	80 - 120
<b>QC Batch ID: B046436</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1915458-01	34900	35400		mg/L	1.4		10	
<b>QC Batch ID: B047419</b>		Used client sample: N								
Ammonia as N	DUP	1915482-02	ND	ND		mg/L			10	
	MS	1915482-02	ND	1.2307	1.1111	mg/L		111		90 - 110 Q03
	MSD	1915482-02	ND	1.2318	1.1111	mg/L	0.1	111	10	90 - 110 Q03

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 19:59  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J & A Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.

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Date of Report: 06/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Longfellow Farming Co.

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916475

Invoice ID: B343195

Enclosed are the results of analyses for samples received by the laboratory on 5/22/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916475

Samples were filtered through a 0.45 micron filter prior to analysis.



Chain of Custody		Analysis Requested	
<b>BC Laboratories, Inc.</b> 4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids	
<b>Report to:</b> Reduced Constituent Suite Project: Dairy Representative Monitoring Program Site: Longfellow Farming Co. Samplers Name: <u>Edward Key</u> Global ID - WDD100005573			
Name: Luthdorff and Scalmanini Address: 500 First Street City: Woodland State: 95695 CA Attn: Till Angermann		Matrix: <u>W</u> Time Sampled: <u>12:05</u> Date Sampled: <u>5/22/19</u> Date Sampled: <u>11:30</u> Date Sampled: <u>10:55</u> Date Sampled: <u>09:45</u>	
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled
-1	LON-MW1A, LON-MW1B LON-MW1C	5/22/19	12:05
-2	LON-MW2A, LON-MW2B LON-MW2C		11:30
-3	LON-MW3A, LON-MW3B LON-MW3C		10:55
-4	LON-MW4A, LON-MW4B LON-MW4C, LON-MW4D		09:45
5	LON-MW5A, LON-MW5B LON-MW5C		
6	LON-MW6A, LON-MW6B LON-MW6C		
7	LON-MW7A, LON-MW7B LON-MW7C, LON-MW7D		
8	Field Duplicate		
9			
10			
11			
<b>Comments:</b> 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luthdorff and Scalmanini Consulting Engineers via email: tlavagnino@lisce.com, rtoyson@lisce.com, pdhalwal@lisce.com, jlovelis@lisce.com 4) Send invoices to Jeanette Lovellis (jlovelis@lisce.com). (A)= Analysis (C)= Container (P)= Preservative			
Relinquished by: (Signature) 		Relinquished by: (Signature) 	
Relinquished by: (Signature) 		Relinquished by: (Signature) 	
Received By:  Date & Time: 5/22/19 20:30 Received by:  Date & Time: 5/22/19 22:15 Received By:  Date & Time:		SHORT HOLDING TIME Cr <sup>6</sup> NO <sub>2</sub> <input checked="" type="checkbox"/> OF SC DO CL BOD MBAS COT CHK BY:  DISTRIBUTION SUB-OUT <input type="checkbox"/>	

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-16475

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 708 Date/Time: 5/22/2015

Temperature: (A) 3.3 °C / (C) 3.2 °C Analyst Init: gmk

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B	B	B						
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 503/603/6030										
QT EPA 515.1/6150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.J										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: gmk Date/Time: 5-22-15 2246 Rev 21 05/23/2016

A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:55  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1916475-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b> Longfellow Farming	<b>Sampling Date:</b> 05/22/2019 12:05
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> LON-MW1C	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of BTSC	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916475-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b> Longfellow Farming	<b>Sampling Date:</b> 05/22/2019 11:30
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> LON-MW2C	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of BTSC	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916475-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b> Longfellow Farming	<b>Sampling Date:</b> 05/22/2019 10:55
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> LON-MW3B	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of BTSC	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916475-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b> Longfellow Farming	<b>Sampling Date:</b> 05/22/2019 09:45
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> LON-MW4D	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Edward Her of BTSC	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:55  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916475-01	<b>Client Sample Name:</b> Longfellow Farming, LON-MW1C, 5/22/2019 12:05:00PM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	11	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	410	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 04:00	05/23/19 08:52		SAV	IC5	1	B047084
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	2	B047358
3	EPA-350.1	06/07/19 11:30	06/10/19 14:20		JMH	SC-1	1	B048256

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:55  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916475-02	<b>Client Sample Name:</b> Longfellow Farming, LON-MW2C, 5/22/2019 11:30:00AM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	6.4	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	690	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 04:00	05/23/19 09:28		SAV	IC5	2	B047084
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	5	B047358
3	EPA-350.1	06/07/19 11:30	06/10/19 14:21		JMH	SC-1	1	B048256

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:55  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916475-03	<b>Client Sample Name:</b> Longfellow Farming, LON-MW3B, 5/22/2019 10:55:00AM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	14	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 04:00	05/23/19 09:46		SAV	IC5	2	B047084
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	5	B047358
3	EPA-350.1	06/07/19 11:30	06/10/19 14:22		JMH	SC-1	1	B048256

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:55  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916475-04	<b>Client Sample Name:</b> Longfellow Farming, LON-MW4D, 5/22/2019 9:45:00AM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	49	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 04:00	05/23/19	11:34	SAV	IC5	5	B047084
2	SM-2540C	05/28/19 15:00	05/28/19	15:00	CAD	MANUAL	10	B047358
3	EPA-350.1	06/07/19 11:30	06/10/19	14:23	JMH	SC-1	1	B048256

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:55  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047084</b>						
Nitrate as N	B047084-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047358</b>						
Total Dissolved Solids @ 180 C	B047358-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048256</b>						
Ammonia as N	B048256-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:55  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047084</b>										
Nitrate as N	B047084-BS1	LCS	5.1130	5.0000	mg/L	102		90 - 110		
<b>QC Batch ID: B047358</b>										
Total Dissolved Solids @ 180 C	B047358-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B048256</b>										
Ammonia as N	B048256-BS1	LCS	1.0319	1.0000	mg/L	103		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:55  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B047084</b>		Used client sample: N								
Nitrate as N	DUP	1916472-01	58.200	58.860		mg/L	1.1		10	
	MS	1916472-01	58.200	85.758	25.253	mg/L		109		80 - 120
	MSD	1916472-01	58.200	85.551	25.253	mg/L	0.2	108	10	80 - 120
<b>QC Batch ID: B047358</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916472-01	3020.0	2960.0		mg/L	2.0		10	
<b>QC Batch ID: B048256</b>		Used client sample: N								
Ammonia as N	DUP	1916596-01	ND	ND		mg/L			10	
	MS	1916596-01	ND	1.0433	1.1111	mg/L		93.9		90 - 110
	MSD	1916596-01	ND	1.1801	1.1111	mg/L	12.3	106	10	90 - 110 Q02

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:55  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Longfellow Farming Co.  
**Project Manager:** Till Angermann

**Notes And Definitions**

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q02 Matrix spike precision is not within the control limits.





Date of Report: 06/13/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Machado Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916638

Invoice ID: B343335

Enclosed are the results of analyses for samples received by the laboratory on 5/24/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Water Analysis (General Chemistry).....	7
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#### 1916638-02 - ADO-MW2d

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### Quality Control Reports

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## Case Narratives

### Case Narrative for Work Order 1916638

Samples were filtered through a 0.45 micron filter prior to analysis.



19-16638

Chain of Custody

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

BC Laboratories, Inc.

Report to:				Analysis Requested			
Name: Luidorff and Scalmanini				From Filtered Sample:			
Address: 500 First Street				Ammonia-N, NO3-N,			
City: Woodland				Total Dissolved Solids			
State: 95695							
Attr: Trill Angermann							
Project: Dairy Representative Monitoring Program							
Site: Machado Dairy							
Samplers Name: Edward Heu							
Global ID - WDR100038666							
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1 Pa Unpreserved		
-1	ADO-MW1s, (ADO-MW1d)	5/23/19	0910	LD	x		
-2	ADO-MW2s, (ADO-MW2d)	5/23/19	0830		x		
3	Field Duplicate				x		
4							
5							
6							
7							
8							
9							
10							

SHORT HOLDING TIME

DO Clg BOD MBAS COT

Clg NH4-N NO3-N SS

Relinquished by: (Signature) *[Signature]* Date & Time 5/23/19 1350

Relinquished by: (Signature) *[Signature]* Date & Time 5/23/19 1430

Relinquished by: (Signature) *[Signature]* Date & Time 5-24-19 08:30

Comments:

- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Luidorff and Scalmanini Consulting Engineers via email: [lsc@lsc.com](mailto:lsc@lsc.com), [rbryson@lsc.com](mailto:rbryson@lsc.com), [pdhvalwa@lsc.com](mailto:pdhvalwa@lsc.com).
- Send invoices to Jeanette Lovelis ([jlovelis@lsc.com](mailto:jlovelis@lsc.com)).

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of

Submission #: 19-16638

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrak  Hand Delivery   
 BC Lab Field Service  Other  (Specify) ASD

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO

Emissivity: 95 Container: ASD Thermometer ID: 274 Date/Time: 5.24.19  
 Temperature: (A) 0.0 °C / (C) 0.1 °C Analyst Init: ASD

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A								
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS		B	B							
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: JJM Date/Time: 5.24.19 9:59

A = Actual / C = Corrected

Rev 21 05/23/2016  
(S:\WPDec\Word\Print\LAB\_DOCS\FORMS\ISASAMREC Rev 20)



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916638-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 08:30
	<b>Project Number:</b>	Machado Dairy	<b>Sampling Date:</b>	05/23/2019 09:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ADO-MW1d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916638-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 08:30
	<b>Project Number:</b>	Machado Dairy	<b>Sampling Date:</b>	05/23/2019 08:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ADO-MW2d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of BTSC	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916638-01	<b>Client Sample Name:</b> Machado Dairy, ADO-MW1d, 5/23/2019 9:10:00AM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	25	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	780	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.15	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 14:00	05/24/19 20:00		KEB	IC2	2	B047241
2	SM-2540C	05/30/19 16:00	05/30/19 16:00		CAD	MANUAL	5	B047523
3	EPA-350.1	06/10/19 10:00	06/11/19 12:12		JMH	SC-1	1	B048412

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916638-02	<b>Client Sample Name:</b> Machado Dairy, ADO-MW2d, 5/23/2019 8:30:00AM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	15	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	690	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.15	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 14:00	05/24/19 20:21		KEB	IC2	1	B047241
2	SM-2540C	05/30/19 16:00	05/30/19 16:00		CAD	MANUAL	3.333	B047523
3	EPA-350.1	06/10/19 10:00	06/11/19 12:13		JMH	SC-1	1	B048412

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047241</b>						
Nitrate as N	B047241-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047523</b>						
Total Dissolved Solids @ 180 C	B047523-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048412</b>						
Ammonia as N	B048412-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047241</b>										
Nitrate as N	B047241-BS1	LCS	5.0990	5.0000	mg/L	102		90 - 110		
<b>QC Batch ID: B047523</b>										
Total Dissolved Solids @ 180 C	B047523-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B048412</b>										
Ammonia as N	B048412-BS1	LCS	1.0222	1.0000	mg/L	102		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B047241</b>		Used client sample: N								
Nitrate as N	DUP	1916645-01	1.0780	1.0710		mg/L	0.7		10	
	MS	1916645-01	1.0780	6.3040	5.0505	mg/L		103		80 - 120
	MSD	1916645-01	1.0780	6.3152	5.0505	mg/L	0.2	104	10	80 - 120
<b>QC Batch ID: B047523</b>		Used client sample: Y - Description: ADO-MW1d, 05/23/2019 09:10								
Total Dissolved Solids @ 180 C	DUP	1916638-01	775.00	775.00		mg/L	0		10	
<b>QC Batch ID: B048412</b>		Used client sample: N								
Ammonia as N	DUP	1916627-01	ND	ND		mg/L			10	
	MS	1916627-01	ND	1.1726	1.1111	mg/L		106		90 - 110
	MSD	1916627-01	ND	1.2146	1.1111	mg/L	3.5	109	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Machado Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.

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Date of Report: 06/04/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Manuel and Alda Lawrence Dairy  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1915720  
Invoice ID: B342379

Enclosed are the results of analyses for samples received by the laboratory on 5/15/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915720

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b>	<b>Chain of Custody</b>	<b>Analysis Requested</b>				
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids				
<b>Report to:</b>						
Reduced Constituent Suite Project: Daily Representative Monitoring Program Site: Manuel and Aids Lawrence Dairy Samplers Name: <u>Tony Zeki</u> Global ID - WDR100039118						
Name: Lundoerff and Scalmanini Address: 500 First Street City: Woodland State: CA Attn: Till Angermann						
<b>Lab #</b>	<b>Strike out non-sampled wells</b>	<b>Date Sampled</b>	<b>Time Sampled</b>	<b>Matrix</b>	<b>Cl, Fe Unpreserved</b>	
- 1	MAL-MW1	5-15-19	1520	W	x	CHK BY <u>MDX</u>
- 2	MAL-MW2		1410		x	DISTRIBUTION
- 3	MAL-MW3		1300		x	SUB-OUT
- 4	MAL-MW4		1445		x	
- 5	MAL-MW5		1375		x	
- 6	MAL-MW6		1140		x	
- 7	MAL-MW7		1105		x	
- 8	MAL-MW8		1220		x	SHORT HOLDING TIME
- 9	Dup 4 Field Duplicate		1200		x	C1+6 NG2 (M) C3 OP SS
10						DC Cl2 BOL MBAS COT
11						
12						
<b>Comments:</b>						Received by: <u>[Signature]</u> Date & Time <u>5/15/19 1740</u>
1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Lundoerff and Scalmanini Consulting Engineers via email: <a href="mailto:lsc@lsc.com">lsc@lsc.com</a> 4) Send invoices to Jeanette Lovelis ( <a href="mailto:lovelis@lsc.com">lovelis@lsc.com</a> ).						Received by: <u>[Signature]</u> Date & Time <u>5/15/19 2230</u>
(A)= Analysis (C)= Container (P)= Preservative						Relinquished by: <u>[Signature]</u>
						Relinquished by: <u>[Signature]</u>
						Relinquished by: <u>[Signature]</u>

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# Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC.		COOLER RECEIPT FORM		Page	Of
Submission #: <u>19-15720</u>					
SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____			SHIPPING CONTAINER Ice Chest <input type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments:					
Custody Seals Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments:					
All samples received? Yes <input type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input type="checkbox"/> No <input type="checkbox"/>					
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.98</u> Container: <u>PE</u> Thermometer ID: <u>208</u>		Date/Time <u>5/15/23</u>	
		Temperature: (A) <u>3.5</u> °C / (C) <u>3.4</u> °C		Analyst Init <u>GSP</u>	

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES <u>XUS</u>	A	A	A	A	A	A	A	A	A	A
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS <u>124</u>	B	B	B	B	B	B	B	B	B	B
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.18150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: JHM Date/Time: 9:30 5/16/19 Rev 21 05/23/2016  
 A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915720-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/15/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Dairy	<b>Sampling Date:</b>	05/15/2019 15:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAL-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915720-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/15/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Dairy	<b>Sampling Date:</b>	05/15/2019 14:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAL-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915720-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/15/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Dairy	<b>Sampling Date:</b>	05/15/2019 13:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAL-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915720-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/15/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Dairy	<b>Sampling Date:</b>	05/15/2019 14:45
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAL-MW4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915720-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/15/2019 22:30
	<b>Project Number:</b>	Manuel and Alda Dairy	<b>Sampling Date:</b>	05/15/2019 13:35
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAL-MW5	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1915720-06</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/15/2019 22:30
	<b>Project Number:</b> Manuel and Alda Dairy	<b>Sampling Date:</b> 05/15/2019 11:40
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MAL-MW6	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Tony Dalri of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1915720-07</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/15/2019 22:30
	<b>Project Number:</b> Manuel and Alda Dairy	<b>Sampling Date:</b> 05/15/2019 11:05
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MAL-MW7	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Tony Dalri of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1915720-08</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/15/2019 22:30
	<b>Project Number:</b> Manuel and Alda Dairy	<b>Sampling Date:</b> 05/15/2019 12:20
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MAL-MW8	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Tony Dalri of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1915720-09</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/15/2019 22:30
	<b>Project Number:</b> Manuel and Alda Dairy	<b>Sampling Date:</b> 05/15/2019 12:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> DUP-4 Field Duplicate	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Tony Dalri of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915720-01	<b>Client Sample Name:</b> Manuel and Alda Dairy, MAL-MW1, 5/15/2019 3:20:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	33	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.083	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/16/19 21:00	05/16/19 22:34		KEB	IC1	5	B046593
2	SM-2540C	05/21/19 11:00	05/21/19 11:00		CAD	MANUAL	10	B046837
3	EPA-350.1	05/30/19 14:30	05/31/19 09:37		JMH	SC-1	1	B047597

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500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915720-02	<b>Client Sample Name:</b> Manuel and Alda Dairy, MAL-MW2, 5/15/2019 2:10:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	150	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2500	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.11	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/16/19 21:00	05/16/19 22:55	KEB	IC1	10	B046593
2	SM-2540C	05/21/19 11:00	05/21/19 11:00	CAD	MANUAL	10	B046837
3	EPA-350.1	05/30/19 14:30	05/31/19 09:39	JMH	SC-1	1	B047597

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500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915720-03	<b>Client Sample Name:</b> Manuel and Alda Dairy, MAL-MW3, 5/15/2019 1:00:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	5.8	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	4800	mg/L	500	250	SM-2540C	ND		2
Ammonia as N	0.59	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/16/19 21:00	05/17/19 09:53		SAV	IC1	5	B046593
2	SM-2540C	05/21/19 11:00	05/21/19 11:00		CAD	MANUAL	50	B046837
3	EPA-350.1	05/30/19 14:30	05/31/19 09:39		JMH	SC-1	1	B047597

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500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915720-04	<b>Client Sample Name:</b> Manuel and Alda Dairy, MAL-MW4, 5/15/2019 2:45:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	160	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2500	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.10	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/16/19 21:00	05/17/19 10:14	SAV	IC1	10	B046593
2	SM-2540C	05/21/19 11:00	05/21/19 11:00	CAD	MANUAL	10	B046837
3	EPA-350.1	05/30/19 14:30	05/31/19 09:41	JMH	SC-1	1	B047597

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500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915720-05	<b>Client Sample Name:</b> Manuel and Alda Dairy, MAL-MW5, 5/15/2019 1:35:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	270	mg/L	2.0	0.84	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	4700	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.28	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/16/19 21:00	05/16/19 23:58		SAV	IC1	20	B046593
2	SM-2540C	05/21/19 11:00	05/21/19 11:00		CAD	MANUAL	20	B046837
3	EPA-350.1	05/30/19 14:30	05/31/19 09:41		JMH	SC-1	1	B047597

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915720-06	<b>Client Sample Name:</b> Manuel and Alda Dairy, MAL-MW6, 5/15/2019 11:40:00AM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	35	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.16	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/16/19 21:00	05/17/19 00:19	SAV	IC1	5	B046593
2	SM-2540C	05/21/19 11:00	05/21/19 11:00	CAD	MANUAL	10	B046837
3	EPA-350.1	05/30/19 14:30	05/31/19 10:42	JMH	SC-1	1	B047599

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915720-07	<b>Client Sample Name:</b> Manuel and Alda Dairy, MAL-MW7, 5/15/2019 11:05:00AM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	34	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.14	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/16/19 21:00	05/17/19 00:40	SAV	IC1	2	B046593
2	SM-2540C	05/21/19 11:00	05/21/19 11:00	CAD	MANUAL	10	B046837
3	EPA-350.1	05/30/19 14:30	05/31/19 09:50	JMH	SC-1	1	B047599

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915720-08	<b>Client Sample Name:</b> Manuel and Alda Dairy, MAL-MW8, 5/15/2019 12:20:00PM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	36	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.11	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/16/19 21:00	05/17/19 01:01	SAV	IC1	5	B046593
2	SM-2540C	05/21/19 11:00	05/21/19 11:00	CAD	MANUAL	10	B046837
3	EPA-350.1	05/30/19 14:30	05/31/19 09:50	JMH	SC-1	1	B047599

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915720-09	<b>Client Sample Name:</b> Manuel and Alda Dairy, DUP-4 Field Duplicate, 5/15/2019 12:00:00PM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	270	mg/L	2.0	0.84	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	4800	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.34	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/16/19 21:00	05/17/19 02:46		SAV	IC1	20	B046593
2	SM-2540C	05/21/19 11:00	05/21/19 11:00		CAD	MANUAL	20	B046837
3	EPA-350.1	05/30/19 14:30	05/31/19 09:51		JMH	SC-1	1	B047599

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046593</b>						
Nitrate as N	B046593-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046837</b>						
Total Dissolved Solids @ 180 C	B046837-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047597</b>						
Ammonia as N	B047597-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B047599</b>						
Ammonia as N	B047599-BLK1	ND	mg/L	0.20	0.067	

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**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046593</b>										
Nitrate as N	B046593-BS1	LCS	5.1930	5.0000	mg/L	104		90 - 110		
<b>QC Batch ID: B046837</b>										
Total Dissolved Solids @ 180 C	B046837-BS1	LCS	615.00	586.00	mg/L	105		90 - 110		
<b>QC Batch ID: B047597</b>										
Ammonia as N	B047597-BS1	LCS	1.0073	1.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B047599</b>										
Ammonia as N	B047599-BS1	LCS	1.0526	1.0000	mg/L	105		90 - 110		

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500 First Street  
Woodland, CA 95695

Reported: 06/04/2019 18:34  
Project: Dairy Representative Monitoring Program  
Project Number: Manuel and Alda Lawrence Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B046593</b>		Used client sample: Y - Description: MAL-MW1, 05/15/2019 15:20								
Nitrate as N	DUP	1915720-01	33.015	33.920		mg/L	2.7		10	
	MS	1915720-01	33.015	59.864	25.253	mg/L		106		80 - 120
	MSD	1915720-01	33.015	60.212	25.253	mg/L	0.6	108	10	80 - 120
<b>QC Batch ID: B046837</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1915674-11	1960.0	1940.0		mg/L	1.0		10	
<b>QC Batch ID: B047597</b>		Used client sample: N								
Ammonia as N	DUP	1915671-05	0.10270	0.12170		mg/L	16.9		10	J,A02
	MS	1915671-05	0.10270	1.2592	1.1111	mg/L		104		90 - 110
	MSD	1915671-05	0.10270	1.1041	1.1111	mg/L	13.1	90.1	10	90 - 110 Q02
<b>QC Batch ID: B047599</b>		Used client sample: Y - Description: MAL-MW6, 05/15/2019 11:40								
Ammonia as N	DUP	1915720-06	0.15980	0.15250		mg/L	4.7		10	J
	MS	1915720-06	0.15980	1.2240	1.1111	mg/L		95.8		90 - 110
	MSD	1915720-06	0.15980	1.1484	1.1111	mg/L	6.4	89.0	10	90 - 110 Q03

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 18:34  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Manuel and Alda Lawrence Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q02 Matrix spike precision is not within the control limits.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 06/06/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Maple Ave Dairy  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1916319  
Invoice ID: B342559

Enclosed are the results of analyses for samples received by the laboratory on 5/21/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916319

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b>		<b>Chain of Custody</b>				
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911						
<b>Report to:</b>		<b>Analysis Requested</b>				
Name: Lohdorff and Scalmanini Address: 500 First Street City: Woodland State: 95695 CA Attn: Till Angermann		From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids				
Project: Dairy Representative Monitoring Program Site: Maple Avenue Dairy Samplers Name: Edward Hew Global ID - WDR100038510						
Reduced Constituent Suite						
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ct Pe Unpreserved	From Filtered Sample
1	MAP-MW8	5/21/19	1255	W	X	X
2	MAP-MW9				X	X
3	MAP-MW10 - 1				X	X
4	Field Duplicate				X	X
5						
6						
7						
8						
9						
10						

SHOR - HOLDING TIME  
Gr-d NO<sub>2</sub> (40) OP SS  
DO Cl<sub>2</sub> BOD MBAS COT

CHRYBY DISTRIBUTION  
SUB OUT

Relinquished by: (Signature)	Received By: (Signature)	Date & Time
Relinquished by: (Signature)	Received by: (Signature)	Date & Time
Relinquished by: (Signature)	Received By: (Signature)	Date & Time

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Lohdorff and Scalmanini Consulting Engineers via email: llsc@lsc.com, roryson@lsc.com, pathaiwa@lsc.com, jlovelis@lsc.com  
 4) Send invoices to Jeanette Lovelis (jlovelis@lsc.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-16319

SHIPPING INFORMATION		SHIPPING CONTAINER		FREE LIQUID
Fed Ex <input type="checkbox"/>	UPS <input checked="" type="checkbox"/>	Ontrac <input type="checkbox"/>	Hand Delivery <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
BC Lab Field Service <input checked="" type="checkbox"/>	Other <input type="checkbox"/> (Specify) _____		Ice Chest <input checked="" type="checkbox"/>	None <input type="checkbox"/> Box <input type="checkbox"/>
			Other <input type="checkbox"/> (Specify) _____	W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/21/2014

Temperature: (A) 1.4 °C / (C) 1.8 °C Analyst Init: GGP

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B									
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL-504										
QT EPA 508/508/508										
QT EPA 515.1/515										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GMP Date/Time: 5-21-14 2220 Rev 21 05/23/2016



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Maple Ave Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1916319-01</b>	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Maple Ave Dairy	<b>Sampling Date:</b>	05/21/2019 12:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAP-MW10	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Maple Ave Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916319-01	<b>Client Sample Name:</b> Maple Ave Dairy, MAP-MW10, 5/21/2019 12:55:00PM, Edward Her
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	47	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	770	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/21/19 18:00	05/22/19	05:34	SAV	IC5	5	B046978
2	SM-2540C	05/24/19 14:30	05/24/19	14:30	CAD	MANUAL	5	B047156
3	EPA-350.1	06/04/19 16:30	06/05/19	14:49	JMH2	SC-1	1	B047981

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Maple Ave Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046978</b>						
Nitrate as N	B046978-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047156</b>						
Total Dissolved Solids @ 180 C	B047156-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047981</b>						
Ammonia as N	B047981-BLK1	ND	mg/L	0.20	0.067	

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Maple Ave Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046978</b>										
Nitrate as N	B046978-BS1	LCS	4.8240	5.0000	mg/L	96.5		90 - 110		
<b>QC Batch ID: B047156</b>										
Total Dissolved Solids @ 180 C	B047156-BS1	LCS	620.00	586.00	mg/L	106		90 - 110		
<b>QC Batch ID: B047981</b>										
Ammonia as N	B047981-BS1	LCS	0.94700	1.0000	mg/L	94.7		90 - 110		

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Maple Ave Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046978</b>		Used client sample: N								
Nitrate as N	DUP	1916316-01	9.8300	9.8000		mg/L	0.3		10	
	MS	1916316-01	9.8300	20.418	10.101	mg/L		105		80 - 120
	MSD	1916316-01	9.8300	19.533	10.101	mg/L	4.4	96.1	10	80 - 120
<b>QC Batch ID: B047156</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916278-02	1290.0	1280.0		mg/L	0.8		10	
<b>QC Batch ID: B047981</b>		Used client sample: N								
Ammonia as N	DUP	1916317-05	0.089900	0.092400		mg/L	2.7		10	J
	MS	1916317-05	0.089900	1.1337	1.1111	mg/L		93.9		90 - 110
	MSD	1916317-05	0.089900	1.1651	1.1111	mg/L	2.7	96.8	10	90 - 110

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Maple Ave Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.

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Date of Report: 06/03/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Richmar Farms Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1915485

Invoice ID: B342184

Enclosed are the results of analyses for samples received by the laboratory on 5/14/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915485

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b>		<b>Chain of Custody</b>											
19-15485		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911											
<b>Report to:</b>													
Reduced Constituent Suite													
Project: Dairy Representative Monitoring Program													
Site: Richmar Farms Dairy													
Samplers Name: Tony Delri													
Global ID - WDR100038761													
Name: Luthdorff and Scalimanni													
Address: 500 First Street													
City: Woodland													
State: 95695													
Attn: Till Angermann													
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled										
-1	RIC-MW1, RIC-MW2	5-13-19	1450										
-2	RIC-MW3, RIC-MW4	5-13-19	1405										
-3	RIC-MW5, RIC-MW6	5-13-19	1320										
-4	RIC-MW7, RIC-MW7T	5-13-19	1535										
-5	RIC-MW8, RIC-MW8T	5-13-19	1615										
-6	RIC-MW9, RIC-MW9d	5-13-19	1650										
7	Field Duplicate												
8													
9													
10													
11													
12													
13													
<table border="1" style="width: 100%;"> <tr> <td>From Filtered Sample:</td> <td></td> </tr> <tr> <td>Ammonia-N, NO3-N,</td> <td></td> </tr> <tr> <td>Total Dissolved Solids</td> <td></td> </tr> </table>				From Filtered Sample:		Ammonia-N, NO3-N,		Total Dissolved Solids					
From Filtered Sample:													
Ammonia-N, NO3-N,													
Total Dissolved Solids													
<table border="1" style="width: 100%;"> <tr> <td>DO</td> <td>Cl<sub>2</sub></td> <td>BOD</td> <td>MBAS</td> <td>COT</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				DO	Cl <sub>2</sub>	BOD	MBAS	COT					
DO	Cl <sub>2</sub>	BOD	MBAS	COT									
<table border="1" style="width: 100%;"> <tr> <td>CHK BY</td> <td>DISTRIBUTION</td> </tr> <tr> <td><i>[Signature]</i></td> <td></td> </tr> <tr> <td>SUB OUT</td> <td></td> </tr> </table>				CHK BY	DISTRIBUTION	<i>[Signature]</i>		SUB OUT					
CHK BY	DISTRIBUTION												
<i>[Signature]</i>													
SUB OUT													
<table border="1" style="width: 100%;"> <tr> <td>Received By:</td> <td>Date &amp; Time</td> </tr> <tr> <td><i>[Signature]</i></td> <td>5-14-19</td> </tr> <tr> <td>Received By:</td> <td>Date &amp; Time</td> </tr> <tr> <td><i>[Signature]</i></td> <td>5-14-19 2230</td> </tr> <tr> <td>Received By:</td> <td>Date &amp; Time</td> </tr> </table>				Received By:	Date & Time	<i>[Signature]</i>	5-14-19	Received By:	Date & Time	<i>[Signature]</i>	5-14-19 2230	Received By:	Date & Time
Received By:	Date & Time												
<i>[Signature]</i>	5-14-19												
Received By:	Date & Time												
<i>[Signature]</i>	5-14-19 2230												
Received By:	Date & Time												
<table border="1" style="width: 100%;"> <tr> <td>Relinquished By: (Signature)</td> <td></td> </tr> <tr> <td>Relinquished By: (Signature)</td> <td></td> </tr> <tr> <td>Relinquished By: (Signature)</td> <td></td> </tr> </table>				Relinquished By: (Signature)		Relinquished By: (Signature)		Relinquished By: (Signature)					
Relinquished By: (Signature)													
Relinquished By: (Signature)													
Relinquished By: (Signature)													
<p><b>Comments:</b></p> <p>1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.</p> <p>2) Lab reports shall identify sampled wells exactly as shown on this CoC.</p> <p>3) Send lab reports to Luthdorff and Scalimanni Consulting Engineers via email: llavagnino@lscce.com, rbyson@lscce.com, pdhalwal@lscce.com, jlovelis@lscce.com</p> <p>4) Send invoices to: Jeanette Lovells (jlovelis@lscce.com).</p>													
<p>(A)= Analyst (C)= Container (P)= Preservative</p>													

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 19-15485

SHIPPING INFORMATION: Fed Ex, UPS, Ontrac, Hand Delivery, BC Lab Field Service. SHIPPING CONTAINER: Ice Chest, None, Box. FREE LIQUID: YES, NO, W/S.

Refrigerant: Ice, Blue Ice, None, Other. Comments:

Custody Seals: Ice Chest, Containers, None. Comments:

All samples received? Yes, No. All samples containers intact? Yes, No. Description(s) match COC? Yes, No.

COC Received: YES, NO. Emissivity: 0.98. Container: YE. Thermometer ID: 208. Date/Time: 5/14/2016. Analyst Init: [Signature]. Temperature: (A) 3.1 °C / (C) 3.0 °C.

Table with columns for SAMPLE CONTAINERS and SAMPLE NUMBERS (1-10). Rows include various sample types like QT PE UNPRES, FT CYANIDE, FT NITROGEN FORMS, etc. with handwritten 'A' and 'B' markings.

Comments: Sample Numbering Completed By: [Signature] Date/Time: 5-14-16 7:30 PM Rev 21 05/23/2016



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915485-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	05/13/2019 14:50
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915485-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	05/13/2019 14:05
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915485-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	05/13/2019 13:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW6	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915485-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	05/13/2019 15:35
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915485-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	05/13/2019 16:15
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW8s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915485-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/14/2019 22:30
	<b>Project Number:</b>	Richmar Farms	<b>Sampling Date:</b>	05/13/2019 16:50
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	RIC-MW9s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of BTST	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915485-01	<b>Client Sample Name:</b> Richmar Farms, RIC-MW1, 5/13/2019 2:50:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	0.10	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.21	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/14/19 17:00	05/15/19 00:11	SAV	IC5	1	B046303
2	SM-2540C	05/16/19 16:00	05/16/19 16:00	CAD	MANUAL	5	B046436
3	EPA-350.1	05/29/19 10:00	05/30/19 12:31	JMH	SC-1	1	B047419

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915485-02	<b>Client Sample Name:</b> Richmar Farms, RIC-MW4, 5/13/2019 2:05:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	0.42	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.18	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/14/19 17:00	05/15/19 00:29	SAV	IC5	1	B046303
2	SM-2540C	05/16/19 16:00	05/16/19 16:00	CAD	MANUAL	5	B046436
3	EPA-350.1	05/29/19 10:30	05/30/19 12:39	JMH	SC-1	1	B047421

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915485-03	<b>Client Sample Name:</b> Richmar Farms, RIC-MW6, 5/13/2019 1:20:00PM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	3.0	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	310	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/14/19 17:00	05/15/19 00:47	SAV	IC5	1	B046303
2	SM-2540C	05/16/19 16:00	05/16/19 16:00	CAD	MANUAL	2	B046436
3	EPA-350.1	05/29/19 10:30	05/30/19 12:34	JMH	SC-1	1	B047421

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915485-04	<b>Client Sample Name:</b> Richmar Farms, RIC-MW7s, 5/13/2019 3:35:00PM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	3.1	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	830	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 17:00	05/15/19 01:04		SAV	IC5	1	B046303
2	SM-2540C	05/16/19 16:00	05/16/19 16:00		CAD	MANUAL	5	B046436
3	EPA-350.1	05/29/19 10:30	05/30/19 12:40		JMH	SC-1	1	B047421

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915485-05	<b>Client Sample Name:</b> Richmar Farms, RIC-MW8s, 5/13/2019 4:15:00PM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	0.11	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	670	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.098	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 17:00	05/15/19 01:22		SAV	IC5	1	B046303
2	SM-2540C	05/16/19 16:00	05/16/19 16:00		CAD	MANUAL	3.333	B046436
3	EPA-350.1	05/29/19 10:30	05/30/19 12:41		JMH	SC-1	1	B047421

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915485-06	<b>Client Sample Name:</b> Richmar Farms, RIC-MW9s, 5/13/2019 4:50:00PM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	50	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	960	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/14/19 17:00	05/15/19 01:40		SAV	IC5	5	B046303
2	SM-2540C	05/16/19 16:00	05/16/19 16:00		CAD	MANUAL	5	B046436
3	EPA-350.1	05/29/19 10:30	05/30/19 12:41		JMH	SC-1	1	B047421

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500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046303</b>						
Nitrate as N	B046303-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046436</b>						
Total Dissolved Solids @ 180 C	B046436-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047419</b>						
Ammonia as N	B047419-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B047421</b>						
Ammonia as N	B047421-BLK1	ND	mg/L	0.20	0.067	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
Project: Dairy Representative Monitoring Program  
Project Number: Richmar Farms Dairy  
Project Manager: Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046303</b>										
Nitrate as N	B046303-BS1	LCS	4.8350	5.0000	mg/L	96.7		90 - 110		
<b>QC Batch ID: B046436</b>										
Total Dissolved Solids @ 180 C	B046436-BS1	LCS	570.00	586.00	mg/L	97.3		90 - 110		
<b>QC Batch ID: B047419</b>										
Ammonia as N	B047419-BS1	LCS	0.94690	1.0000	mg/L	94.7		90 - 110		
<b>QC Batch ID: B047421</b>										
Ammonia as N	B047421-BS1	LCS	0.99280	1.0000	mg/L	99.3		90 - 110		

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Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits			
								Percent Recovery	RPD	Percent Recovery	Lab
<b>QC Batch ID: B046303</b>		Used client sample: N									
Nitrate as N	DUP	1915484-02	7.6550	7.7900		mg/L	1.7		10		
	MS	1915484-02	7.6550	33.288	25.253	mg/L		102		80 - 120	
	MSD	1915484-02	7.6550	32.399	25.253	mg/L	2.7	98.0	10	80 - 120	
<b>QC Batch ID: B046436</b>		Used client sample: N									
Total Dissolved Solids @ 180 C	DUP	1915458-01	34900	35400		mg/L	1.4		10		
<b>QC Batch ID: B047419</b>		Used client sample: N									
Ammonia as N	DUP	1915482-02	ND	ND		mg/L			10		
	MS	1915482-02	ND	1.2307	1.1111	mg/L		111		90 - 110	Q03
	MSD	1915482-02	ND	1.2318	1.1111	mg/L	0.1	111	10	90 - 110	Q03
<b>QC Batch ID: B047421</b>		Used client sample: Y - Description: RIC-MW6, 05/13/2019 13:20									
Ammonia as N	DUP	1915485-03	ND	ND		mg/L			10		
	MS	1915485-03	ND	1.2902	1.1111	mg/L		116		90 - 110	Q03
	MSD	1915485-03	ND	1.2371	1.1111	mg/L	4.2	111	10	90 - 110	Q03

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500 First Street  
Woodland, CA 95695

**Reported:** 06/03/2019 20:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Richmar Farms Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 06/04/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Sierra View Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1915721

Invoice ID: B342304

Enclosed are the results of analyses for samples received by the laboratory on 5/15/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915721

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b>			<b>Chain of Custody</b>																																																																				
19-15721			4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911																																																																				
<b>Analysis Requested</b>																																																																							
From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids																																																																							
<table border="1"> <tr> <th>Lab #</th> <th>Strike out non-sampled wells</th> <th>Date Sampled</th> <th>Time Sampled</th> <th>Matrix</th> <th>Q1 Pp Unpreserved</th> </tr> <tr> <td>1</td> <td>SIE-MW1 -1</td> <td>5-15-19</td> <td>0745</td> <td>W</td> <td>x</td> </tr> <tr> <td>2</td> <td>SIE-MW2 -2</td> <td>5-15-19</td> <td>0835</td> <td>W</td> <td>x</td> </tr> <tr> <td>3</td> <td>SIE-MW3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>SIE-MW4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>Dup. 5 Field Duplicate →</td> <td>5-15-19</td> <td>1200</td> <td>W</td> <td>x</td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>9</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1 Pp Unpreserved	1	SIE-MW1 -1	5-15-19	0745	W	x	2	SIE-MW2 -2	5-15-19	0835	W	x	3	SIE-MW3					4	SIE-MW4					5	Dup. 5 Field Duplicate →	5-15-19	1200	W	x	6						7						8						9						10					
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<p><b>Comments:</b></p> <p>1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.</p> <p>2) Lab reports shall identify sampled wells exactly as shown on this CoC.</p> <p>3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: rlscv@lscce.com, rbyson@lscce.com, jlohawel@lscce.com.</p> <p>4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).</p>																																																																							

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-15721

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO

Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/15 2230

Temperature: (A) 3.5 °C / (C) 3.4 °C Analyst Init: GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES <u>448</u>	<u>A</u>	<u>A</u>	<u>A</u>							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS <u>124</u>	<u>B</u>	<u>B</u>	<u>B</u>							
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 504/608/8080										
QT EPA 515.1/6150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: JTM Date/Time: 9:30 5-16-19 Rev 21 05/23/2016

A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 13:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915721-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/15/2019 22:30
	<b>Project Number:</b>	Sierra View	<b>Sampling Date:</b>	05/15/2019 07:45
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SIE-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915721-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/15/2019 22:30
	<b>Project Number:</b>	Sierra View	<b>Sampling Date:</b>	05/15/2019 08:35
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SIE-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915721-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/15/2019 22:30
	<b>Project Number:</b>	Sierra View	<b>Sampling Date:</b>	05/15/2019 12:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUP-5 Field Duplicate	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Tony Dalri of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 13:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915721-01	<b>Client Sample Name:</b> Sierra View, SIE-MW1, 5/15/2019 7:45:00AM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	9.5	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	190	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/16/19 11:00	05/16/19 19:41		KEB	IC8	2	B046453
2	SM-2540C	05/20/19 11:30	05/20/19 11:30		CAD	MANUAL	2	B046628
3	EPA-350.1	05/30/19 14:30	05/31/19 09:52		JMH	SC-1	1	B047599

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 13:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915721-02	<b>Client Sample Name:</b> Sierra View, SIE-MW3, 5/15/2019 8:35:00AM, Tony Dalri
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	22	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	450	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/16/19 11:00	05/16/19 20:02		KEB	IC8	2	B046453
2	SM-2540C	05/20/19 11:30	05/20/19 11:30		CAD	MANUAL	2	B046628
3	EPA-350.1	05/30/19 14:30	05/31/19 09:53		JMH	SC-1	1	B047599

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 13:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915721-03	<b>Client Sample Name:</b> Sierra View, DUP-5 Field Duplicate, 5/15/2019 12:00:00PM, Tony Dalri
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	21	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	450	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/16/19 11:00	05/16/19 20:22		KEB	IC8	2	B046453
2	SM-2540C	05/20/19 11:30	05/20/19 11:30		CAD	MANUAL	2	B046628
3	EPA-350.1	05/30/19 14:30	05/31/19 09:53		JMH	SC-1	1	B047599

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 13:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046453</b>						
Nitrate as N	B046453-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046628</b>						
Total Dissolved Solids @ 180 C	B046628-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047599</b>						
Ammonia as N	B047599-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 13:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046453</b>										
Nitrate as N	B046453-BS1	LCS	5.0270	5.0000	mg/L	101		90 - 110		
<b>QC Batch ID: B046628</b>										
Total Dissolved Solids @ 180 C	B046628-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B047599</b>										
Ammonia as N	B047599-BS1	LCS	1.0526	1.0000	mg/L	105		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

Reported: 06/04/2019 13:07  
Project: Dairy Representative Monitoring Program  
Project Number: Sierra View Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B046453</b>		Used client sample: N								
Nitrate as N	DUP	1915674-11RE1	0.44500	0.36500		mg/L	19.8		10	J,A02
	MS	1915674-11RE1	0.44500	25.399	25.253	mg/L		98.8	80 - 120	
	MSD	1915674-11RE1	0.44500	25.429	25.253	mg/L	0.1	98.9	10 80 - 120	
<b>QC Batch ID: B046628</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1915646-01	28900	28600		mg/L	1.0		10	
<b>QC Batch ID: B047599</b>		Used client sample: N								
Ammonia as N	DUP	1915720-06	0.15980	0.15250		mg/L	4.7		10	J
	MS	1915720-06	0.15980	1.2240	1.1111	mg/L		95.8	90 - 110	
	MSD	1915720-06	0.15980	1.1484	1.1111	mg/L	6.4	89.0	10 90 - 110	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/04/2019 13:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Sierra View Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 06/06/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Zonneveld Dairy Complex

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916320

Invoice ID: B342560

Enclosed are the results of analyses for samples received by the laboratory on 5/21/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916320

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b>		<b>Chain of Custody</b>			
19-16320		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911			
<b>Report to:</b>					
Luhdorff and Scalmani		Reduced Constituent Suite			
Address: 500 First Street		Project: Dairy Representative Monitoring Program			
City: Woodland		Site: Zonneveld Dairy Complex			
State: 95695		Samplers Name: Edward New			
Attr: Till Angermann		Global ID - WDR100038511			
<b>Analysis Requested</b>		From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids			
SHORT HOLDING TIME Cr <sup>6</sup> NO <sub>2</sub> OP SS DO Cl <sub>2</sub> BOD MBAS COT CHK BY: <u>MS</u> DISTRIBUTION: <u>NA</u> SUB OUT: <input type="checkbox"/>					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qt Pp Unpreserved
1	ZON-MW1A, ZON-MW1B ZON-MW1C	5/21/19			x
2	ZON-MW2A, ZON-MW2B	5/21/19	1600	W	x
3	ZON-MW3A, ZON-MW3B		1515		x
4	ZON-MW4A, ZON-MW4B				x
5	ZON-MW5A, ZON-MW5B				x
6	ZON-MW7				x
7	Field Duplicate				x
8					
9					
10					
<b>Comments:</b>					
1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.					
2) Lab reports shall identify sampled wells exactly as shown on this CoC.					
3) Send lab reports to Luhdorff and Scalmani Consulting Engineers via email: llaves@lsc.com, rbryson@lsc.com, pdhall@lsc.com, jlovelis@lsc.com					
4) Send invoices to Jeanette Lovelis (jlovelis@lsc.com).					
<b>Relinquished by: (Signature)</b>		<b>Relinquished by: (Signature)</b>		<b>Relinquished by: (Signature)</b>	
<b>Received by: (Signature)</b>		<b>Received by: (Signature)</b>		<b>Received by: (Signature)</b>	
<b>Date &amp; Time</b>		<b>Date &amp; Time</b>		<b>Date &amp; Time</b>	
		5/21/19 80:00		5/21/19 2200	

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-16320

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/21/2010

Temperature: (A) 1.4 °C / (C) 1.8 °C Analyst Init: BSP

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A								
4oz / 5oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 5oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	B	B								
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 518/618/818										
QT EPA 515/615/815										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: LMB Date/Time: 5-21-10 2220 Rev 21 05/23/2016

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916320-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Zonneveld Dairy	<b>Sampling Date:</b>	05/21/2019 16:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ZON-MW2B	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916320-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Zonneveld Dairy	<b>Sampling Date:</b>	05/21/2019 15:15
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ZON-MW3B	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Edward Her of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916320-01	<b>Client Sample Name:</b> Zonneveld Dairy, ZON-MW2B, 5/21/2019 4:00:00PM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	18	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	280	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 01:00	05/22/19	10:43	SAV	IC1	2	B046971
2	SM-2540C	05/23/19 16:00	05/23/19	16:00	CAD	MANUAL	2	B047123
3	EPA-350.1	06/04/19 16:30	06/05/19	14:49	JMH2	SC-1	1	B047981

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916320-02	<b>Client Sample Name:</b> Zonneveld Dairy, ZON-MW3B, 5/21/2019 3:15:00PM, Edward Her
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	50	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	730	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.069	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 01:00	05/22/19	11:04	SAV	IC1	5	B046971
2	SM-2540C	05/23/19 16:00	05/23/19	16:00	CAD	MANUAL	3.333	B047123
3	EPA-350.1	06/04/19 16:30	06/05/19	14:51	JMH2	SC-1	1	B047981

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046971</b>						
Nitrate as N	B046971-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047123</b>						
Total Dissolved Solids @ 180 C	B047123-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047981</b>						
Ammonia as N	B047981-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046971</b>										
Nitrate as N	B046971-BS1	LCS	5.1270	5.0000	mg/L	103		90 - 110		
<b>QC Batch ID: B047123</b>										
Total Dissolved Solids @ 180 C	B047123-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B047981</b>										
Ammonia as N	B047981-BS1	LCS	0.94700	1.0000	mg/L	94.7		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046971</b>		Used client sample: N								
Nitrate as N	DUP	1916315-01	82.980	83.260		mg/L	0.3		10	
	MS	1916315-01	82.980	136.43	50.505	mg/L		106		80 - 120
	MSD	1916315-01	82.980	135.64	50.505	mg/L	0.6	104	10	80 - 120
<b>QC Batch ID: B047123</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916277-01	1070.0	1075.0		mg/L	0.5		10	
<b>QC Batch ID: B047981</b>		Used client sample: N								
Ammonia as N	DUP	1916317-05	0.089900	0.092400		mg/L	2.7		10	J
	MS	1916317-05	0.089900	1.1337	1.1111	mg/L		93.9		90 - 110
	MSD	1916317-05	0.089900	1.1651	1.1111	mg/L	2.7	96.8	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Zonneveld Dairy Complex  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



## Central Area

---





Date of Report: 06/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Albert Mendes Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916473

Invoice ID: B343265

Enclosed are the results of analyses for samples received by the laboratory on 5/22/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916473

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b>		<b>Chain of Custody</b>			
19-16473		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911			
<b>Report to:</b>					
Reduced Constituent Suite					
Name: Luthdorff and Scalfamini					
Address: 500 First Street					
City: Woodland					
State: 95695					
Attn: Till Angermann					
Project: Dairy Representative Monitoring Program					
Site: Albert Mendes Dairy					
Samplers Name: Del Tech / Steg Light					
Global ID - GADAIRY00001					
<b>Analysis Requested</b>					
From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1 Pa Unpreserved
-1	<del>MEN-MW1s, MEN-MW2s, MEN-MW3s, MEN-MW4s, MEN-MW5s, MEN-MW6s, MEN-MW7s, MEN-MW8s</del>	5-22-19	10:23	GW	x
-2	<del>MEN-MW1s, MEN-MW2s, MEN-MW3s, MEN-MW4s, MEN-MW5s, MEN-MW6s, MEN-MW7s, MEN-MW8s</del>		10:46		x
-3	<del>MEN-MW1s, MEN-MW2s, MEN-MW3s, MEN-MW4s, MEN-MW5s, MEN-MW6s, MEN-MW7s, MEN-MW8s</del>		11:43		x
-4	<del>MEN-MW1s, MEN-MW2s, MEN-MW3s, MEN-MW4s, MEN-MW5s, MEN-MW6s, MEN-MW7s, MEN-MW8s</del>		11:28		x
-5	<del>MEN-MW1s, MEN-MW2s, MEN-MW3s, MEN-MW4s, MEN-MW5s, MEN-MW6s, MEN-MW7s, MEN-MW8s</del>		12:27		x
-6	<del>MEN-MW1s, MEN-MW2s, MEN-MW3s, MEN-MW4s, MEN-MW5s, MEN-MW6s, MEN-MW7s, MEN-MW8s</del>		10:05		x
-7	<del>MEN-MW1s, MEN-MW2s, MEN-MW3s, MEN-MW4s, MEN-MW5s, MEN-MW6s, MEN-MW7s, MEN-MW8s</del>		11:09		x
-8	<del>MEN-MW1s, MEN-MW2s, MEN-MW3s, MEN-MW4s, MEN-MW5s, MEN-MW6s, MEN-MW7s, MEN-MW8s</del>		12:04	VSS	x
9	Field Duplicate				x
10					
11					
12					

SHORT HOLDING TIME  
Cr<sup>6</sup> NO<sub>3</sub> (NO<sub>2</sub>) OP SS  
DO Cl<sub>2</sub> BOB MBAS COT

CHK BY: [Signature] DISTRIBUTION: [Signature]  
SUB-OUT: [Signature]

Relinquished by: (Signature) [Signature]	Relinquished by: (Signature) [Signature]	Received By: [Signature]	Date & Time: 5/22/19 16:40
Relinquished by: (Signature) [Signature]	Relinquished by: (Signature) [Signature]	Received By: [Signature]	Date & Time: 5/22/19 16:40
Relinquished by: (Signature) [Signature]	Relinquished by: (Signature) [Signature]	Received By: [Signature]	Date & Time: 5/22/19 22:15

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luthdorff and Scalfamini Consulting Engineers via email: luvsgmno@liscce.com, rnyson@liscce.com, pthallival@liscce.com, jlovelis@liscce.com  
 4) Send invoices to Jeannette Lovelis (jlovelis@liscce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-16473

SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
--	--	--	--	--

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

Intact: Yes  No  Intact: Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/22/2015  
 Temperature: (A) 0.8 °C / (C) 0.7 °C Analyst Init: GMF

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
EPA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/508/509										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 6015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: GMF



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500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916473-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	05/22/2019 10:23
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916473-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	05/22/2019 10:46
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916473-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	05/22/2019 11:43
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916473-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	05/22/2019 11:28
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916473-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	05/22/2019 12:27
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916473-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	05/22/2019 10:05
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916473-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	05/22/2019 11:09
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916473-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Albert Mendes Dairy	<b>Sampling Date:</b>	05/22/2019 12:04
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MEN-MW8s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916473-01	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW1s, 5/22/2019 10:23:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	45	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	3300	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	2.0	mg/L	0.40	0.13	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/23/19	23:40	SAV	IC2	5	B047185
2	SM-2540C	05/28/19 15:00	05/28/19	15:00	CAD	MANUAL	20	B047359
3	EPA-350.1	06/06/19 10:30	06/10/19	14:27	JMH	SC-1	2	B048153

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**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916473-02	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW2s, 5/22/2019 10:46:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	40	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	1.6	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 00:01		SAV	IC2	5	B047185
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	10	B047359
3	EPA-350.1	06/06/19 10:30	06/10/19 14:32		JMH	SC-1	1	B048153

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**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916473-03	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW3s, 5/22/2019 11:43:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	99	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.25	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 00:21		SAV	IC2	10	B047185
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	10	B047359
3	EPA-350.1	06/06/19 10:30	06/10/19 14:33		JMH	SC-1	1	B048153

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**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916473-04	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW4s, 5/22/2019 11:28:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	120	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.18	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 00:42		SAV	IC2	10	B047185
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	10	B047359
3	EPA-350.1	06/06/19 10:30	06/10/19 14:34		JMH	SC-1	1	B048153

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**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916473-05	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW5s, 5/22/2019 12:27:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	53	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.14	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 01:03		SAV	IC2	5	B047185
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	5	B047359
3	EPA-350.1	06/06/19 10:30	06/10/19 14:34		JMH	SC-1	1	B048153

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**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916473-06	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW6s, 5/22/2019 10:05:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	13	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1900	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.78	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 01:23		SAV	IC2	2	B047185
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	10	B047359
3	EPA-350.1	06/06/19 10:30	06/10/19 14:36		JMH	SC-1	1	B048153

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**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916473-07	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW7s, 5/22/2019 11:09:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	79	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.22	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 01:44		SAV	IC2	5	B047185
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	10	B047359
3	EPA-350.1	06/06/19 10:30	06/10/19 14:36		JMH	SC-1	1	B048153

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**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916473-08	<b>Client Sample Name:</b> Albert Mendes Dairy, MEN-MW8s, 5/22/2019 12:04:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	24	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2200	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.15	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 02:04		SAV	IC2	10	B047185
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	10	B047359
3	EPA-350.1	06/06/19 10:30	06/10/19 14:38		JMH	SC-1	1	B048153

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**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047185</b>						
Nitrate as N	B047185-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047359</b>						
Total Dissolved Solids @ 180 C	B047359-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048153</b>						
Ammonia as N	B048153-BLK1	ND	mg/L	0.20	0.067	

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**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047185</b>										
Nitrate as N	B047185-BS1	LCS	4.9330	5.0000	mg/L	98.7		90 - 110		
<b>QC Batch ID: B047359</b>										
Total Dissolved Solids @ 180 C	B047359-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B048153</b>										
Ammonia as N	B048153-BS1	LCS	1.0238	1.0000	mg/L	102		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B047185</b>		Used client sample: Y - Description: MEN-MW1s, 05/22/2019 10:23								
Nitrate as N	DUP	1916473-01	44.975	44.680		mg/L	0.7		10	
	MS	1916473-01	44.975	70.884	25.253	mg/L		103		80 - 120
	MSD	1916473-01	44.975	70.758	25.253	mg/L	0.2	102	10	80 - 120
<b>QC Batch ID: B047359</b>		Used client sample: Y - Description: MEN-MW1s, 05/22/2019 10:23								
Total Dissolved Solids @ 180 C	DUP	1916473-01	3300.0	3380.0		mg/L	2.4		10	
<b>QC Batch ID: B048153</b>		Used client sample: Y - Description: MEN-MW1s, 05/22/2019 10:23								
Ammonia as N	DUP	1916473-01	1.9888	1.8814		mg/L	5.6		10	
	MS	1916473-01	1.9888	3.1260	1.1111	mg/L		102		90 - 110
	MSD	1916473-01	1.9888	3.0880	1.1111	mg/L	1.2	98.9	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 14:25  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Albert Mendes Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.

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Date of Report: 06/11/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Anchor J. Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916474

Invoice ID: B343115

Enclosed are the results of analyses for samples received by the laboratory on 5/22/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916474

Samples were filtered through a 0.45 micron filter prior to analysis



BC Laboratories, Inc.		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Chain of Custody											
Report to:			Analysis Requested												
Reduced Constituent Suite			From Filtered Sample:												
Project: Dairy Representative Monitoring Program			Ammonia-N, NO3-N												
Site: Anchor J Dairy			Total Dissolved Solids												
Samplers Name: Del Tech (Steve) Soble															
Global ID - GADAIRY00002															
Name:	Address:	City:	State:	Attn:	Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ct/Pc Unpreserved	SHORT HOLDING TIME	CHK BY	DISPERIBUTION	RECEIVED BY	DATE & TIME
Luhdorff and Scalmanini	500 First Street	Woodland	95695	Till Angermann	- 1	ANC-MW1	5-22	1507	GW	x	NO <sub>2</sub>	168	NO <sub>3</sub>	5/22/19 16:40	
					- 2	ANC-MW2		1439		x	OP		SS	5/22/19 16:40	
					- 3	ANC-MW3		1413		x	MBIAS		COT	5/22/19 22:15	
					- 4	ANC-MW4		1538		x					
					- 5	ANC-MW5s, <del>ANC-MW5</del>		1617		x					
					- 6	ANC-MW6s, <del>ANC-MW6</del>		1348		x					
					- 7	ANC-MW7s, <del>ANC-MW7</del>		1325		x					
					8	Field Duplicate				x					
					9										
					10										
					11										
					12										

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lscce.com, rbryson@lscce.com, pdhallival@lscce.com, jlovelis@lscce.com  
 4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).

(A)= Analysis (C)= Container (P)= Preservative



BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-16474

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received:  YES  NO

Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/22/2015

Temperature: (A) 0.8 °C / (C) 07 °C Analyst Init: GAN

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A			
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/E150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GAN Date/Time: 5-22-15 7236 Rev 21 05/23/2016

A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916474-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	05/22/2019 15:07
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916474-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	05/22/2019 14:39
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916474-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	05/22/2019 14:13
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916474-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	05/22/2019 15:38
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916474-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	05/22/2019 16:17
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916474-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	05/22/2019 13:48
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916474-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Anchor J. Dairy	<b>Sampling Date:</b>	05/22/2019 13:25
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANC-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916474-01	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW1, 5/22/2019 3:07:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	ND	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
<b>Total Dissolved Solids @ 180 C</b>	<b>1600</b>	<b>mg/L</b>	<b>100</b>	<b>50</b>	<b>SM-2540C</b>	ND		2
Ammonia as N	0.12	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/23/19 12:00	05/23/19 14:11	SAV	IC5	2	B047085
2	SM-2540C	05/29/19 14:00	05/29/19 14:00	CAD	MANUAL	10	B047434
3	EPA-350.1	06/06/19 14:30	06/07/19 11:42	JMH	SC-1	1	B048159

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Woodland, CA 95695

**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916474-02	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW2, 5/22/2019 2:39:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	46	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.17	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 12:00	05/23/19	15:22	KEB	IC5	5	B047085
2	SM-2540C	05/29/19 14:00	05/29/19	14:00	CAD	MANUAL	10	B047434
3	EPA-350.1	06/06/19 14:30	06/07/19	11:46	JMH	SC-1	1	B048159

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Woodland, CA 95695

**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916474-03	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW3, 5/22/2019 2:13:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	22	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	770	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 12:00	05/23/19 18:39		KEB	IC5	2	B047085
2	SM-2540C	05/29/19 14:00	05/29/19 14:00		CAD	MANUAL	5	B047434
3	EPA-350.1	06/06/19 14:30	06/07/19 11:48		JMH	SC-1	1	B048159

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Woodland, CA 95695

**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916474-04	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW4, 5/22/2019 3:38:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	47	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	740	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 12:00	05/23/19 15:58		KEB	IC5	5	B047085
2	SM-2540C	05/29/19 14:00	05/29/19 14:00		CAD	MANUAL	3.333	B047434
3	EPA-350.1	06/06/19 14:30	06/07/19 11:48		JMH	SC-1	1	B048159

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Woodland, CA 95695

**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916474-05	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW5s, 5/22/2019 4:17:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	13	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2300	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.10	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/23/19 12:00	05/23/19 16:16	KEB	IC5	5	B047085
2	SM-2540C	05/29/19 14:00	05/29/19 14:00	CAD	MANUAL	10	B047434
3	EPA-350.1	06/06/19 14:30	06/07/19 11:49	JMH	SC-1	1	B048159

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916474-06	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW6s, 5/22/2019 1:48:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	37	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.14	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 12:00	05/23/19 17:09		KEB	IC5	2	B047085
2	SM-2540C	05/29/19 14:00	05/29/19 14:00		CAD	MANUAL	10	B047434
3	EPA-350.1	06/06/19 14:30	06/07/19 11:51		JMH	SC-1	1	B048159

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Woodland, CA 95695

**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916474-07	<b>Client Sample Name:</b> Anchor J. Dairy, ANC-MW7s, 5/22/2019 1:25:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	24	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 12:00	05/23/19 17:27		KEB	IC5	2	B047085
2	SM-2540C	05/29/19 14:00	05/29/19 14:00		CAD	MANUAL	5	B047434
3	EPA-350.1	06/06/19 14:30	06/07/19 11:53		JMH	SC-1	1	B048159

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047085</b>						
Nitrate as N	B047085-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047434</b>						
Total Dissolved Solids @ 180 C	B047434-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048159</b>						
Ammonia as N	B048159-BLK1	ND	mg/L	0.20	0.067	

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Woodland, CA 95695

**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047085</b>										
Nitrate as N	B047085-BS1	LCS	4.8170	5.0000	mg/L	96.3		90 - 110		
<b>QC Batch ID: B047434</b>										
Total Dissolved Solids @ 180 C	B047434-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B048159</b>										
Ammonia as N	B048159-BS1	LCS	1.0429	1.0000	mg/L	104		90 - 110		

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**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B047085</b>		Used client sample: Y - Description: ANC-MW1, 05/22/2019 15:07								
Nitrate as N	DUP	1916474-01	ND	ND		mg/L			10	
	MS	1916474-01	ND	10.079	10.101	mg/L		99.8		80 - 120
	MSD	1916474-01	ND	10.139	10.101	mg/L	0.6	100	10	80 - 120
<b>QC Batch ID: B047434</b>		Used client sample: Y - Description: ANC-MW1, 05/22/2019 15:07								
Total Dissolved Solids @ 180 C	DUP	1916474-01	1580.0	1560.0		mg/L	1.3		10	
<b>QC Batch ID: B048159</b>		Used client sample: Y - Description: ANC-MW1, 05/22/2019 15:07								
Ammonia as N	DUP	1916474-01	0.11600	0.11770		mg/L	1.5		10	J
	MS	1916474-01	0.11600	1.2870	1.1111	mg/L		105		90 - 110
	MSD	1916474-01	0.11600	1.2461	1.1111	mg/L	3.2	102	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
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**Reported:** 06/11/2019 16:53  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Anchor J. Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 06/06/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Bettencourt & Marson Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1915995

Invoice ID: B342574

Enclosed are the results of analyses for samples received by the laboratory on 5/17/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915995

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		Chain of Custody				
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Analysis Requested				
Report to: Reduced Constituent Suite						
Name: Luhnoff and Scalmanini	Project: Dairy Representative Monitoring Program	From Filtered Sample:				
Address: 500 First Street	Site: Bettencourt & Marson Dairy	Ammonia-N, NO3-N, Total Dissolved Solids				
City: Woodland	Samplers Name: <u>DelfTech / Ashley Putnam</u>					
State: 95695	Global ID - GADAIRY00003					
Attn: Tili Angermann						
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Oil Pe Unpreserved	Analysis Requested
- 1	<del>BET-MW1s, BET-MW2s, BET-MW3s, BET-MW4s, BET-MW5s, BET-MW6s, BET-MW7s, BET-MW8s</del>	5-17-19	10:34	GW	x	
- 2	<del>BET-MW1s, BET-MW2s, BET-MW3s, BET-MW4s, BET-MW5s, BET-MW6s, BET-MW7s, BET-MW8s</del>		10:10		x	
- 3	<del>BET-MW1s, BET-MW2s, BET-MW3s, BET-MW4s, BET-MW5s, BET-MW6s, BET-MW7s, BET-MW8s</del>		9:54		x	
- 4	<del>BET-MW1s, BET-MW2s, BET-MW3s, BET-MW4s, BET-MW5s, BET-MW6s, BET-MW7s, BET-MW8s</del>		11:14		x	
- 5	<del>BET-MW1s, BET-MW2s, BET-MW3s, BET-MW4s, BET-MW5s, BET-MW6s, BET-MW7s, BET-MW8s</del>		11:39		x	
- 6	<del>BET-MW1s, BET-MW2s, BET-MW3s, BET-MW4s, BET-MW5s, BET-MW6s, BET-MW7s, BET-MW8s</del>		12:31		x	
- 7	<del>BET-MW1s, BET-MW2s, BET-MW3s, BET-MW4s, BET-MW5s, BET-MW6s, BET-MW7s, BET-MW8s</del>		12:00		x	
- 8	<del>BET-MW1s, BET-MW2s, BET-MW3s, BET-MW4s, BET-MW5s, BET-MW6s, BET-MW7s, BET-MW8s</del>		12:20		x	
9	<del>Field Duplicate</del>					
10						
11						
12						

  

SHORTEST HOLDING TIME	Cr <sup>6+</sup>	NO <sub>2</sub>	NO <sub>3</sub>	OP	SS
	DO	Cl <sub>2</sub>	BOD	MRAS	COT

  

CHK BY	DISTRIBUTION
<u>GS</u>	<input checked="" type="checkbox"/>
	SUB-OUT <input type="checkbox"/>

  

Received By:	Date & Time
<u>ASCO</u>	5/17/19 16:05
Received by:	Date & Time
<u>Putnam</u>	5/17/19 2:30
Received By:	Date & Time

  

Relinquished by: (Signature) Ashley Putnam / 1605  
 Relinquished by: (Signature) ASCO  
 Relinquished by: (Signature)

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhnoff and Scalmanini Consulting Engineers via email: llavagnino@lisce.com, lbyson@lisce.com, pdhalliwell@lisce.com, jlovells@lisce.com  
 4) Send invoices to Jeanette Lovells (jlovells@lisce.com).

(A)= Analysis (C)= ContAINER (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-15995

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 708 Date/Time: 5/17 2130

Temperature: (A) 1.6 °C / (C) 1.5 °C Analyst Init: EML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 568										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: -3 was twice however one was put with another chain according to color.

Sample Numbering Completed By: EML Date/Time: 5-17-19 2241 Rev 21 05/23/2016

A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915995-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	05/17/2019 10:34
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915995-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	05/17/2019 10:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915995-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	05/17/2019 09:54
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915995-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	05/17/2019 11:14
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915995-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	05/17/2019 11:39
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915995-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	05/17/2019 12:39
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1915995-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	05/17/2019 12:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1915995-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Bettencourt & Marson Dairy	<b>Sampling Date:</b>	05/17/2019 12:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	BET-MW8s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915995-01	<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW1s, 5/17/2019 10:34:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	140	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	960	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.13	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 15:00	05/18/19 00:04		KEB	IC2	10	B046689
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	5	B046933
3	EPA-350.1	05/31/19 12:00	06/03/19 14:15		JMH	SC-1	1	B047663

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915995-02	<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW2s, 5/17/2019 10:10:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	0.45	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	1700	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.27	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 15:00	05/18/19 00:25		KEB	IC2	1	B046689
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	5	B046933
3	EPA-350.1	05/31/19 16:00	06/03/19 13:33		JMH	SC-1	1	B047710

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915995-03	<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW3s, 5/17/2019 9:54:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	42	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.16	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 15:00	05/18/19 00:45		KEB	IC2	5	B046689
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	5	B046933
3	EPA-350.1	05/31/19 16:00	06/03/19 13:35		JMH	SC-1	1	B047710

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915995-04	<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW4s, 5/17/2019 11:14:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	60	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.19	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 15:00	05/18/19 01:06		KEB	IC2	5	B046689
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	10	B046933
3	EPA-350.1	05/31/19 16:00	06/03/19 13:37		JMH	SC-1	1	B047710

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915995-05	<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW5s, 5/17/2019 11:39:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	58	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	710	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.13	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 15:00	05/18/19	01:27	KEB	IC2	5	B046689
2	SM-2540C	05/22/19 12:00	05/22/19	12:00	CAD	MANUAL	3.333	B046933
3	EPA-350.1	05/31/19 16:00	06/03/19	13:39	JMH	SC-1	1	B047710

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915995-06	<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW6s, 5/17/2019 12:39:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	45	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	590	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	0.087	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/17/19 15:00	05/18/19 01:47	KEB	IC2	5	B046689
2	SM-2540C	05/22/19 12:00	05/22/19 12:00	CAD	MANUAL	2	B046933
3	EPA-350.1	05/31/19 16:00	06/03/19 13:39	JMH	SC-1	1	B047710

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Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915995-07	<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW7s, 5/17/2019 12:00:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	39	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	580	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	0.074	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/17/19 15:00	05/18/19 02:08	KEB	IC2	5	B046689
2	SM-2540C	05/22/19 12:00	05/22/19 12:00	CAD	MANUAL	2	B046933
3	EPA-350.1	05/31/19 16:00	06/03/19 13:40	JMH	SC-1	1	B047710

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**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915995-08	<b>Client Sample Name:</b> Bettencourt & Marson Dairy, BET-MW8s, 5/17/2019 12:20:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	37	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	510	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	0.11	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/17/19 15:00	05/18/19 02:28	KEB	IC2	5	B046689
2	SM-2540C	05/22/19 12:00	05/22/19 12:00	CAD	MANUAL	2	B046933
3	EPA-350.1	05/31/19 16:00	06/03/19 13:30	JMH	SC-1	1	B047710

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**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046689</b>						
Nitrate as N	B046689-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046933</b>						
Total Dissolved Solids @ 180 C	B046933-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047663</b>						
Ammonia as N	B047663-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B047710</b>						
Ammonia as N	B047710-BLK1	ND	mg/L	0.20	0.067	

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**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046689</b>										
Nitrate as N	B046689-BS1	LCS	5.1630	5.0000	mg/L	103		90 - 110		
<b>QC Batch ID: B046933</b>										
Total Dissolved Solids @ 180 C	B046933-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B047663</b>										
Ammonia as N	B047663-BS1	LCS	1.0039	1.0000	mg/L	100		90 - 110		
<b>QC Batch ID: B047710</b>										
Ammonia as N	B047710-BS1	LCS	0.99180	1.0000	mg/L	99.2		90 - 110		

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Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits			
								Percent Recovery	RPD	Percent Recovery	Lab Quals
<b>QC Batch ID: B046689</b>		Used client sample: Y - Description: BET-MW8s, 05/17/2019 12:20									
Nitrate as N	DUP	1915995-08	36.865	36.875		mg/L	0.0		10		
	MS	1915995-08	36.865	63.081	25.253	mg/L		104		80 - 120	
	MSD	1915995-08	36.865	62.697	25.253	mg/L	0.6	102	10	80 - 120	
<b>QC Batch ID: B046933</b>		Used client sample: Y - Description: BET-MW1s, 05/17/2019 10:34									
Total Dissolved Solids @ 180 C	DUP	1915995-01	960.00	975.00		mg/L	1.6		10		
<b>QC Batch ID: B047663</b>		Used client sample: N									
Ammonia as N	DUP	1917216-02	0.16830	0.15250		mg/L	9.9		10		J
	MS	1917216-02	0.16830	1.0368	1.1111	mg/L		78.2		90 - 110	Q03
	MSD	1917216-02	0.16830	1.1247	1.1111	mg/L	8.1	86.1	10	90 - 110	Q03
<b>QC Batch ID: B047710</b>		Used client sample: Y - Description: BET-MW8s, 05/17/2019 12:20									
Ammonia as N	DUP	1915995-08	0.10690	0.097600		mg/L	9.1		10		J
	MS	1915995-08	0.10690	1.2312	1.1111	mg/L		101		90 - 110	
	MSD	1915995-08	0.10690	1.1764	1.1111	mg/L	4.6	96.3	10	90 - 110	

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Woodland, CA 95695

**Reported:** 06/06/2019 11:15  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Bettencourt & Marson Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 06/07/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Diepersloot Ranch

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916149

Invoice ID: B342755

Enclosed are the results of analyses for samples received by the laboratory on 5/20/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916149

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		Chain of Custody			
19-16149 4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911					
<b>Report to:</b>					
Name: Luthdorff and Scalmanini Address: 500 First Street City: Woodland State: 95695 CA Attn: Till Angermann		<b>Analysis Requested</b>  From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids			
Project: Dairy Representative Monitoring Program Site: Diepersloot Ranch Samplers Name: DefTech/Ashtey Pitham Global ID - WDR100039237					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1/Pc Unpreserved
- 1	DIE-MW1	5-20-19	1328	GW	x
- 2	DIE-MW2	↓	1232	↓	x
- 3	DIE-MW3	↓	1259	↓	x
- 4	DIE-MW4	↓	1345	↓	x
5	Field-Supplements				
6					
7					
8					
9					
10					
11					
12					

**Comments:**

- 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- 2) Lab reports shall identify sampled wells exactly as shown on this CoC.
- 3) Send lab reports to Luthdorff and Scalmanini Consulting Engineers via email: [lvagnino@lscce.com](mailto:lvagnino@lscce.com), [rbryson@lscce.com](mailto:rbryson@lscce.com), [pdrattwal@lscce.com](mailto:pdrattwal@lscce.com)
- 4) Send invoices to Jeanelle Lovells ([jlovelles@lscce.com](mailto:jlovelles@lscce.com)).

(A)= Analysis (C)= Container (P)= Preservative

**SHORT HOLDING TIME**  
 Cr<sup>6</sup> NO<sub>2</sub> NO<sub>3</sub> OP SS  
 DO Cl<sub>2</sub> BOD MBAS COT

**CHAIN DISTRIBUTION**  
 IN  OUT   
 SUB OUT

Relinquished by: (Signature) *Janey Pitham* 5-20-19 19:15  
 Date & Time: 5/20/19 19:15

Relinquished by: (Signature) *Justin* 5/20/19 2200  
 Date & Time: 5/20/19 2200

Received By: *Justin* 5/20/19 2200  
 Date & Time: 5/20/19 2200

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-16149

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/20/2000

Temperature: (A) 1.6 °C / (C) 1.5 °C Analyst Init: EAC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: WAB Date/Time: 5-20-19

A = Actual / C = Corrected

2210 Rev 21 05/23/2016  
15:\WPDoc\Wast\PerfecLAB\_DOC\FORMS\ISAMRECrev 201



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:17  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1916149-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/20/2019 22:00
	<b>Project Number:</b> Diepersloot Ranch	<b>Sampling Date:</b> 05/20/2019 13:28
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> DIE-MW1	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916149-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/20/2019 22:00
	<b>Project Number:</b> Diepersloot Ranch	<b>Sampling Date:</b> 05/20/2019 12:32
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> DIE-MW2	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916149-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/20/2019 22:00
	<b>Project Number:</b> Diepersloot Ranch	<b>Sampling Date:</b> 05/20/2019 12:59
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> DIE-MW3	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916149-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/20/2019 22:00
	<b>Project Number:</b> Diepersloot Ranch	<b>Sampling Date:</b> 05/20/2019 13:45
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> DIE-MW4	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

**Reported:** 06/07/2019 12:17  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916149-01	<b>Client Sample Name:</b> Diepersloot Ranch, DIE-MW1, 5/20/2019 1:28:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	100	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	650	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.079	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/20/19 21:00	05/21/19 07:08	SAV	IC8	10	B046871
2	SM-2540C	05/24/19 13:00	05/24/19 13:00	CAD	MANUAL	3.333	B047155
3	EPA-350.1	06/03/19 15:00	06/04/19 16:34	JMH	SC-1	1	B047866

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**Reported:** 06/07/2019 12:17  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916149-02	<b>Client Sample Name:</b> Diepersloot Ranch, DIE-MW2, 5/20/2019 12:32:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	16	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/20/19 21:00	05/21/19 07:29		SAV	IC8	1	B046871
2	SM-2540C	05/24/19 13:00	05/24/19 13:00		CAD	MANUAL	5	B047155
3	EPA-350.1	06/03/19 15:00	06/04/19 16:34		JMH	SC-1	1	B047866

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:17  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916149-03	<b>Client Sample Name:</b> Diepersloot Ranch, DIE-MW3, 5/20/2019 12:59:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	30	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	860	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/20/19 21:00	05/21/19 08:30		SAV	IC8	5	B046871
2	SM-2540C	05/24/19 13:00	05/24/19 13:00		CAD	MANUAL	5	B047155
3	EPA-350.1	06/03/19 15:00	06/04/19 16:36		JMH	SC-1	1	B047866

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:17  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916149-04	<b>Client Sample Name:</b> Diepersloot Ranch, DIE-MW4, 5/20/2019 1:45:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	45	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	820	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/20/19 21:00	05/21/19 10:55		SAV	IC8	5	B046871
2	SM-2540C	05/24/19 13:00	05/24/19 13:00		CAD	MANUAL	5	B047155
3	EPA-350.1	06/03/19 15:00	06/04/19 16:36		JMH	SC-1	1	B047866

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Woodland, CA 95695

**Reported:** 06/07/2019 12:17  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046871</b>						
Nitrate as N	B046871-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047155</b>						
Total Dissolved Solids @ 180 C	B047155-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047866</b>						
Ammonia as N	B047866-BLK1	ND	mg/L	0.20	0.067	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:17  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046871</b>										
Nitrate as N	B046871-BS1	LCS	5.2230	5.0000	mg/L	104		90 - 110		
<b>QC Batch ID: B047155</b>										
Total Dissolved Solids @ 180 C	B047155-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B047866</b>										
Ammonia as N	B047866-BS1	LCS	0.94610	1.0000	mg/L	94.6		90 - 110		

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500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:17  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B046871</b>		Used client sample: N								
Nitrate as N	DUP	1916148-01	12.727	12.808		mg/L	0.6		10	
	MS	1916148-01	12.727	17.794	5.0505	mg/L		100		80 - 120
	MSD	1916148-01	12.727	17.870	5.0505	mg/L	0.4	102	10	80 - 120
<b>QC Batch ID: B047155</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916234-02	700.00	690.00		mg/L	1.4		10	
<b>QC Batch ID: B047866</b>		Used client sample: N								
Ammonia as N	DUP	1916148-01	ND	ND		mg/L			10	
	MS	1916148-01	ND	1.1391	1.1111	mg/L		103		90 - 110
	MSD	1916148-01	ND	1.1429	1.1111	mg/L	0.3	103	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:17  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Diepersloot Ranch  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 06/06/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Durrer Dairy  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1915869  
Invoice ID: B342557

Enclosed are the results of analyses for samples received by the laboratory on 5/16/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915869

Samples were filtered through a 0.45 micron filter prior to analysis.





BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-15869

SHIPPING INFORMATION  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

FREE LIQUID  
 YES  NO   
 W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  
 YES  NO

Emissivity: 0.08 Container: PE Thermometer ID: 208 Date/Time: 5/16 2230  
 Temperature: (A) 1.1 °C / (C) 1.0 °C Analyst Init: GAN

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/605/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
1oz / 16oz / 32oz AMBER										
1oz / 16oz / 32oz JAR										
OIL SLEEVE										
CB VIAL										
LASTIC BAG										
EDLAR BAG										
FEROUS IRON										
VCORE										
FART KIT										
MEMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: GAN Date/Time: 5-16-14 2300 Rev 21 05/23/2016  
 Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915869-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/16/2019 22:30
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	05/16/2019 15:32
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW7	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
	<hr/>			
	1915869-02	<b>COC Number:</b>	---	<b>Receive Date:</b>
<b>Project Number:</b>		Durrer Dairy	<b>Sampling Date:</b>	05/16/2019 16:14
<b>Sampling Location:</b>		---	<b>Sample Depth:</b>	---
<b>Sampling Point:</b>		DUR-MW8	<b>Lab Matrix:</b>	Water
<b>Sampled By:</b>		Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
<hr/>				
1915869-03		<b>COC Number:</b>	---	<b>Receive Date:</b>
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	05/16/2019 14:42
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW9	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Groundwater
	<hr/>			

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915869-01	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW7, 5/16/2019 3:32:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	70	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2100	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	18	mg/L	4.0	1.3	EPA-350.1	ND	A07	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/16/19 17:00	05/17/19 11:12		SAV	IC2	10	B046603
2	SM-2540C	05/22/19 10:00	05/22/19 10:00		CAD	MANUAL	10	B046909
3	EPA-350.1	06/04/19 13:00	06/05/19 15:22		JMH2	SC-1	20	B047979

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915869-02	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW8, 5/16/2019 4:14:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	40	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	780	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	1.9	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/16/19 17:00	05/17/19 13:57		SAV	IC2	2	B046603
2	SM-2540C	05/22/19 10:00	05/22/19 10:00		CAD	MANUAL	5	B046909
3	EPA-350.1	06/04/19 13:00	06/05/19 14:31		JMH2	SC-1	1	B047979

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915869-03	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW9, 5/16/2019 2:42:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	7.2	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	630	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.079	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/16/19 17:00	05/17/19 11:53		SAV	IC2	1	B046603
2	SM-2540C	05/22/19 10:00	05/22/19 10:00		CAD	MANUAL	3.333	B046909
3	EPA-350.1	06/04/19 13:00	06/05/19 14:31		JMH2	SC-1	1	B047979

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046603</b>						
Nitrate as N	B046603-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046909</b>						
Total Dissolved Solids @ 180 C	B046909-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047979</b>						
Ammonia as N	B047979-BLK1	ND	mg/L	0.20	0.067	

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046603</b>										
Nitrate as N	B046603-BS1	LCS	4.9260	5.0000	mg/L	98.5		90 - 110		
<b>QC Batch ID: B046909</b>										
Total Dissolved Solids @ 180 C	B046909-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B047979</b>										
Ammonia as N	B047979-BS1	LCS	0.97610	1.0000	mg/L	97.6		90 - 110		

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046603</b>		Used client sample: N								
Nitrate as N	DUP	1915808-04	ND	ND		mg/L			10	
	MS	1915808-04	ND	5.2414	5.0505	mg/L		104		80 - 120
	MSD	1915808-04	ND	5.2636	5.0505	mg/L	0.4	104	10	80 - 120
<b>QC Batch ID: B046909</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1915854-01	31100	31400		mg/L	1.0		10	
<b>QC Batch ID: B047979</b>		Used client sample: N								
Ammonia as N	DUP	1916933-01	9.4370	9.3530		mg/L	0.9		10	
	MS	1916933-01	9.4370	12.802	5.0000	mg/L		67.3		90 - 110 Q03
	MSD	1916933-01	9.4370	12.952	5.0000	mg/L	1.2	70.3	10	90 - 110 Q03

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.







Date of Report: 06/06/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Durrer Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1915996

Invoice ID: B342575

Enclosed are the results of analyses for samples received by the laboratory on 5/17/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915996

Samples were filtered through a 0.45 micron filter prior to analysis.



Chain of Custody

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

BC Laboratories, Inc.

19-15996-05-17 19-15996

Report to:

Reduced Constituent Suite

Analysis Requested

Project: Dairy Representative Monitoring Program

Site: Durrer Dairy

Samplers Name: Antonio/Del-Tan

Global ID - WDR100038159

From Filtered Sample:  
Ammonia-N, NO3-N,  
Total Dissolved Solids

Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ct/Pc Unpreserved
DUR-MW1 -1	5/17/19	942	GW	x
DUR-MW2 -2		1002		x
DUR-MW3 -3		1037		x
DUR-MW4 -4		1040		x
DUR-MW6 -5		1133		x
DUR-MW7				x
DUR-MW8				x
DUR-MW9				x
DUR-MW10s, DUR-MW10d - 6				x
Field Duplicate				x

SHORT HOLDING TIME	
Cr <sup>6</sup>	NO <sub>2</sub>
DO	Cl <sub>2</sub>
BOD	MBAS
COT	

CHK BY	DISTRIBUTION
	SUB OUT

Relinquished by: (Signature)	5/17/19	17:15	Received By:	5/17/19 17:15
Relinquished by: (Signature)			Received by:	5/17/19 2:30
Relinquished by: (Signature)			Received By:	

Notes:  
 e indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 spots shall identify sampled wells exactly as shown on this CoC.  
 lab reports to Luldhoff and Scalmanini Consulting Engineers via email:  
 gmino@lscce.com, rbryson@lscce.com, pdhallwa@lscce.com,  
 ris@lscce.com  
 invoices to Jeanette Lovells (jlovells@lscce.com).

Analysis (C)= Container (P)= Preservative



BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-15046

<b>SHIPPING INFORMATION</b> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		<b>SHIPPING CONTAINER</b> Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		<b>FREE LIQUID</b> YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
---	--	---	--	---

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time 5/17 2130  
 Temperature: (A) 2.4 °C / (C) 2.3 °C Analyst Init GM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A				
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8090										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
5oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLREVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GM Date/Time: 5-17-19 2254 Rev 21 05/23/2016  
 A = Actual / C = Corrected

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915996-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	05/17/2019 09:42
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915996-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	05/17/2019 10:02
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915996-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	05/17/2019 10:37
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915996-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	05/17/2019 10:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915996-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Durrer Dairy	<b>Sampling Date:</b>	05/17/2019 11:33
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	DUR-MW6	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1915996-06</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/17/2019 21:30
	<b>Project Number:</b> Durrer Dairy	<b>Sampling Date:</b> 05/17/2019 11:16
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> DUR-MW10d	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Antonio Morales of DTO	<b>Sample Type:</b> Water
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915996-01	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW1, 5/17/2019 9:42:00AM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	130	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.090	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 16:00	05/18/19 15:44		KEB	IC8	10	B046688
2	SM-2540C	05/22/19 13:00	05/22/19 13:00		CAD	MANUAL	10	B046936
3	EPA-350.1	05/31/19 16:00	06/03/19 13:42		JMH	SC-1	1	B047710

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Woodland, CA 95695

**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915996-02	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW2, 5/17/2019 10:02:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	17	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1900	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	32	mg/L	4.0	1.3	EPA-350.1	ND	A07	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 16:00	05/18/19 17:07		KEB	IC8	2	B046688
2	SM-2540C	05/22/19 13:00	05/22/19 13:00		CAD	MANUAL	10	B046936
3	EPA-350.1	05/31/19 16:00	06/03/19 13:42		JMH	SC-1	20	B047710

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Woodland, CA 95695

**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915996-03	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW3, 5/17/2019 10:37:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	4.6	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.43	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 16:00	05/18/19 17:27		KEB	IC8	2	B046688
2	SM-2540C	05/22/19 13:00	05/22/19 13:00		CAD	MANUAL	10	B046936
3	EPA-350.1	06/03/19 11:00	06/04/19 14:49		JMH	SC-1	1	B047792

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915996-04	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW4, 5/17/2019 10:20:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	97	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2500	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	68	mg/L	10	3.4	EPA-350.1	ND	A07	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 16:00	05/18/19 17:48		KEB	IC8	10	B046688
2	SM-2540C	05/22/19 13:00	05/22/19 13:00		CAD	MANUAL	10	B046936
3	EPA-350.1	06/03/19 11:00	06/04/19 14:51		JMH	SC-1	50	B047792

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Woodland, CA 95695

**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915996-05	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW6, 5/17/2019 11:33:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	83	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.11	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/17/19 16:00	05/18/19 18:08	KEB	IC8	5	B046688
2	SM-2540C	05/22/19 13:00	05/22/19 13:00	CAD	MANUAL	10	B046936
3	EPA-350.1	06/03/19 11:00	06/04/19 14:51	JMH	SC-1	1	B047792

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**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915996-06	<b>Client Sample Name:</b> Durrer Dairy, DUR-MW10d, 5/17/2019 11:16:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	73	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.067	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 16:00	05/18/19 18:29		KEB	IC8	5	B046688
2	SM-2540C	05/22/19 13:00	05/22/19 13:00		CAD	MANUAL	10	B046936
3	EPA-350.1	06/03/19 11:00	06/04/19 14:53		JMH	SC-1	1	B047792

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Woodland, CA 95695

**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046688</b>						
Nitrate as N	B046688-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046936</b>						
Total Dissolved Solids @ 180 C	B046936-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047710</b>						
Ammonia as N	B047710-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B047792</b>						
Ammonia as N	B047792-BLK1	ND	mg/L	0.20	0.067	

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**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046688</b>										
Nitrate as N	B046688-BS1	LCS	5.1880	5.0000	mg/L	104		90 - 110		
<b>QC Batch ID: B046936</b>										
Total Dissolved Solids @ 180 C	B046936-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B047710</b>										
Ammonia as N	B047710-BS1	LCS	0.99180	1.0000	mg/L	99.2		90 - 110		
<b>QC Batch ID: B047792</b>										
Ammonia as N	B047792-BS1	LCS	0.99640	1.0000	mg/L	99.6		90 - 110		

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**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab
									RPD	Percent Recovery	
<b>QC Batch ID: B046688</b>		Used client sample: Y - Description: DUR-MW1, 05/17/2019 09:42									
Nitrate as N	DUP	1915996-01	126.90	127.28		mg/L	0.3		10		
	MS	1915996-01	126.90	177.07	50.505	mg/L		99.3		80 - 120	
	MSD	1915996-01	126.90	177.29	50.505	mg/L	0.1	99.8	10	80 - 120	
<b>QC Batch ID: B046936</b>		Used client sample: Y - Description: DUR-MW1, 05/17/2019 09:42									
Total Dissolved Solids @ 180 C	DUP	1915996-01	1560.0	1580.0		mg/L	1.3		10		
<b>QC Batch ID: B047710</b>		Used client sample: N									
Ammonia as N	DUP	1915995-08	0.10690	0.097600		mg/L	9.1		10		J
	MS	1915995-08	0.10690	1.2312	1.1111	mg/L		101		90 - 110	
	MSD	1915995-08	0.10690	1.1764	1.1111	mg/L	4.6	96.3	10	90 - 110	
<b>QC Batch ID: B047792</b>		Used client sample: N									
Ammonia as N	DUP	1915997-11	ND	ND		mg/L			10		
	MS	1915997-11	ND	1.1253	1.1111	mg/L		101		90 - 110	
	MSD	1915997-11	ND	1.2000	1.1111	mg/L	6.4	108	10	90 - 110	

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Woodland, CA 95695

**Reported:** 06/06/2019 11:21  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Durrer Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 06/13/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Frank J. Gomes Dairy #1  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1916752  
Invoice ID: B343336

Enclosed are the results of analyses for samples received by the laboratory on 5/24/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916752

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b> 19-16752		<b>Chain of Custody</b>				
Name: Luhdorff and Scalmanini Address: 500 First Street City: Woodland State: 95695 CA Attn: Till Angermann		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911				
<b>Report to:</b> Reduced Constituent Suite Project: Daily Representative Monitoring Program Site: Frank J. Gomes Dairy #1 Samplers Name: <i>Del Tech / Steep Light</i> Global ID - GADAIRY00004		<b>Analysis Requested</b> From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids				
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ct Pa Unpreserved	From Filtered Sample
-1	FG1-MW1s, <del>FG1-MW1s</del>	5-24-19	13:07	G-W	x	x
-2	FG1-MW2s, <del>FG1-MW2s</del>		11:40		x	x
-3	FG1-MW3s, <del>FG1-MW3s</del>		12:27		x	x
-4	FG1-MW4s, <del>FG1-MW4s</del>		9:48		x	x
-5	FG1-MW5s, <del>FG1-MW5s</del>		7:20		x	x
-6	FG1-MW6s, <del>FG1-MW6s</del>		10:18		x	x
-7	FG1-MW7s, <del>FG1-MW7s</del>		10:56		x	x
-8	FG1-MW8s, <del>FG1-MW8s</del>		11:25		x	x
-9	<del>FG1-MW9s</del> , FG1-MW9d		14:13		x	x
-10	Field Duplicate #4		9:1A	vs8	x	x
11						
12						
13						

  

Comments: 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lscce.com, rnyson@lscce.com, pdhalliwell@lscce.com, jlovelis@lscce.com 4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).	Relinquished by: (Signature) <i>[Signature]</i> 5-24-19 15:40 Relinquished by: (Signature) <i>[Signature]</i> Relinquished by: (Signature) <i>[Signature]</i>
--	---

  

Received By: <i>[Signature]</i> 5/24/19 15:10 Received By: <i>[Signature]</i> 5/24/19 21:00 Received By: <i>[Signature]</i>
---

  

SHORT HOLDING TIME Cr <sup>6+</sup> NO <sub>2</sub> (NO <sub>3</sub> ) OP SS DO Cl <sub>2</sub> FOD MBAS COT CHK BY <i>[Signature]</i> DISTRIBUTION SUB OUT <input type="checkbox"/>
--

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-16752

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time 5/24/19 2100  
 Temperature: (A) 2.6 °C / (C) 2.5 °C Analyst Init EWC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A	A	A
4oz / 8oz / 16oz PE UNPRES										
2oz Cr*										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: EWC Date/Time: 5-24-19 2100 Rev 21 06/23/2016  
 A = Actual / C = Corrected

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916752-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Frank J. Gomes Dairy #1	<b>Sampling Date:</b>	05/24/2019 13:07
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916752-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Frank J. Gomes Dairy #1	<b>Sampling Date:</b>	05/24/2019 11:46
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916752-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Frank J. Gomes Dairy #1	<b>Sampling Date:</b>	05/24/2019 12:27
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916752-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Frank J. Gomes Dairy #1	<b>Sampling Date:</b>	05/24/2019 09:48
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916752-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Frank J. Gomes Dairy #1	<b>Sampling Date:</b>	05/24/2019 09:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916752-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Frank J. Gomes Dairy #1	<b>Sampling Date:</b>	05/24/2019 10:18
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916752-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Frank J. Gomes Dairy #1	<b>Sampling Date:</b>	05/24/2019 10:56
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916752-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Frank J. Gomes Dairy #1	<b>Sampling Date:</b>	05/24/2019 11:25
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW8s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916752-09	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Frank J. Gomes Dairy #1	<b>Sampling Date:</b>	05/24/2019 14:13
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG1-MW9d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916752-10	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Frank J. Gomes Dairy #1	<b>Sampling Date:</b>	05/24/2019 00:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate #4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916752-01	<b>Client Sample Name:</b> Frank J. Gomes Dairy #1, FG1-MW1s, 5/24/2019 1:07:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	0.28	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.15	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 22:00	05/24/19 22:53	KEB	IC8	1	B047283
2	SM-2540C	05/31/19 15:00	05/31/19 15:00	CAD	MANUAL	10	B047646
3	EPA-350.1	06/10/19 15:00	06/11/19 12:16	JMH	SC-1	1	B048413

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Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916752-02	<b>Client Sample Name:</b> Frank J. Gomes Dairy #1, FG1-MW2s, 5/24/2019 11:46:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	58	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.24	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 22:00	05/24/19 23:14		KEB	IC8	5	B047283
2	SM-2540C	05/31/19 15:00	05/31/19 15:00		CAD	MANUAL	10	B047646
3	EPA-350.1	06/10/19 15:00	06/11/19 12:21		JMH	SC-1	1	B048413

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Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916752-03	<b>Client Sample Name:</b> Frank J. Gomes Dairy #1, FG1-MW3s, 5/24/2019 12:27:00PM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	19	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.15	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 22:00	05/24/19 23:34	SAV	IC8	1	B047283
2	SM-2540C	05/31/19 15:00	05/31/19 15:00	CAD	MANUAL	5	B047646
3	EPA-350.1	06/10/19 15:00	06/11/19 12:22	JMH	SC-1	1	B048413

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Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916752-04	<b>Client Sample Name:</b> Frank J. Gomes Dairy #1, FG1-MW4s, 5/24/2019 9:48:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	83	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1900	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.20	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 22:00	05/24/19 23:55		SAV	IC8	10	B047283
2	SM-2540C	05/31/19 15:00	05/31/19 15:00		CAD	MANUAL	10	B047646
3	EPA-350.1	06/10/19 15:00	06/11/19 12:23		JMH	SC-1	1	B048413

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916752-05	<b>Client Sample Name:</b> Frank J. Gomes Dairy #1, FG1-MW5s, 5/24/2019 9:20:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	8.1	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.19	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 22:00	05/25/19 00:15	SAV	IC8	2	B047283
2	SM-2540C	05/31/19 15:00	05/31/19 15:00	CAD	MANUAL	5	B047646
3	EPA-350.1	06/10/19 15:00	06/11/19 12:23	JMH	SC-1	1	B048413

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916752-06	<b>Client Sample Name:</b> Frank J. Gomes Dairy #1, FG1-MW6s, 5/24/2019 10:18:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	31	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	630	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.15	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 22:00	05/25/19 00:36	SAV	IC8	5	B047283
2	SM-2540C	05/31/19 15:00	05/31/19 15:00	CAD	MANUAL	3.333	B047646
3	EPA-350.1	06/10/19 15:00	06/11/19 12:25	JMH	SC-1	1	B048413

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916752-07	<b>Client Sample Name:</b> Frank J. Gomes Dairy #1, FG1-MW7s, 5/24/2019 10:56:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	37	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	660	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.18	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 22:00	05/25/19 00:56		SAV	IC8	2	B047283
2	SM-2540C	05/31/19 15:00	05/31/19 15:00		CAD	MANUAL	3.333	B047646
3	EPA-350.1	06/10/19 15:00	06/11/19 12:25		JMH	SC-1	1	B048413

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916752-08	<b>Client Sample Name:</b> Frank J. Gomes Dairy #1, FG1-MW8s, 5/24/2019 11:25:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	19	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	900	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.19	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 22:00	05/25/19 01:17		SAV	IC8	1	B047283
2	SM-2540C	05/31/19 15:00	05/31/19 15:00		CAD	MANUAL	5	B047646
3	EPA-350.1	06/10/19 15:00	06/11/19 12:27		JMH	SC-1	1	B048413

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916752-09	<b>Client Sample Name:</b> Frank J. Gomes Dairy #1, FG1-MW9d, 5/24/2019 2:13:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	1.2	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	290	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	0.17	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 22:00	05/25/19 02:59		SAV	IC8	1	B047283
2	SM-2540C	05/31/19 15:00	05/31/19 15:00		CAD	MANUAL	2	B047646
3	EPA-350.1	06/10/19 15:00	06/11/19 12:29		JMH	SC-1	1	B048413

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916752-10	<b>Client Sample Name:</b> Frank J. Gomes Dairy #1, Field Duplicate #4, 5/24/2019 12:00:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	58	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.26	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 22:00	05/25/19 03:20		SAV	IC8	5	B047283
2	SM-2540C	05/31/19 15:00	05/31/19 15:00		CAD	MANUAL	10	B047646
3	EPA-350.1	06/10/19 15:00	06/11/19 12:30		JMH	SC-1	1	B048413

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047283</b>						
Nitrate as N	B047283-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047646</b>						
Total Dissolved Solids @ 180 C	B047646-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048413</b>						
Ammonia as N	B048413-BLK1	ND	mg/L	0.20	0.067	

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Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047283</b>										
Nitrate as N	B047283-BS1	LCS	5.3820	5.0000	mg/L	108		90 - 110		
<b>QC Batch ID: B047646</b>										
Total Dissolved Solids @ 180 C	B047646-BS1	LCS	600.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B048413</b>										
Ammonia as N	B048413-BS1	LCS	0.95530	1.0000	mg/L	95.5		90 - 110		

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047283</b>		Used client sample: Y - Description: FG1-MW1s, 05/24/2019 13:07								
Nitrate as N	DUP	1916752-01	0.28200	0.33500		mg/L	17.2		10	A02
	MS	1916752-01	0.28200	5.8798	5.0505	mg/L		111	80 - 120	
	MSD	1916752-01	0.28200	5.8111	5.0505	mg/L	1.2	109	10 80 - 120	
<b>QC Batch ID: B047646</b>		Used client sample: Y - Description: FG1-MW1s, 05/24/2019 13:07								
Total Dissolved Solids @ 180 C	DUP	1916752-01	1590.0	1630.0		mg/L	2.5		10	
<b>QC Batch ID: B048413</b>		Used client sample: Y - Description: FG1-MW1s, 05/24/2019 13:07								
Ammonia as N	DUP	1916752-01	0.14930	0.14930		mg/L	0		10	J
	MS	1916752-01	0.14930	1.2820	1.1111	mg/L		102	90 - 110	
	MSD	1916752-01	0.14930	1.2829	1.1111	mg/L	0.1	102	10 90 - 110	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #1  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.







Date of Report: 06/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Gallo Cattle Co. Bear Creek  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1916626  
Invoice ID: B343290

Enclosed are the results of analyses for samples received by the laboratory on 5/23/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916626

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to:				Analysis Requested	
Name: Luhdorff and Scalmanini		Reduced Constituent Suite			
Address: 500 First Street		Project: Dairy Representative Monitoring Program			
City: Woodland		Site: Gallo Cattle Company Bear Creek			
State: 95695		Samplers Name: DeFatech / Ashley Putnam			
Attn: Till Angermann		Global ID - GADAIRY00005			
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl Pe Unpreserved
-1	BEA-MW1dd	5-23-19	13:17	GW	x
-2	BEA-MW2dd		11:58		x
-3	BEA-MW3d		12:40		x
-4	BEA-MW4d		12:20		x
5					
6					
7					
8					
9					
10					
11					

  

From Filtered Sample:	
Ammonia-N, NO3-N,	
Total Dissolved Solids	

  

SHORT	LOADING TIME
NO <sub>2</sub>	NO <sub>3</sub>
OP	SS
NO	
CL	
FOT	MBAS
COT	

  

CHK BY	DISTRIBUTION
65	
	SUB OUT

  

Relinquished by: (Signature)	Date & Time
<i>[Signature]</i>	5/23/19 18:10
Relinquished by: (Signature)	Date & Time
<i>[Signature]</i>	5/23/19 22:00
Relinquished by: (Signature)	Date & Time

  

Comments:

- Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.
- Lab reports shall identify sampled wells exactly as shown on this CoC.
- Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lscce.com, rbryson@lscce.com, pohalwal@lscce.com, jllovelis@lscce.com
- Send invoices to Jeanette Lovells (jlovelis@lscce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC.		COOLER RECEIPT FORM		Page 1 Of 5	
Submission #: <u>19-16626</u>					
SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____			SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments: _____					
Custody Seals Ice Chest <input checked="" type="checkbox"/> Containers <input type="checkbox"/> Intact: Yes <input type="checkbox"/> No <input type="checkbox"/> Intact: Yes <input type="checkbox"/> No <input type="checkbox"/> None <input type="checkbox"/> Comments: _____					
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.98</u> Container: <u>PE</u> Thermometer ID: <u>108</u> Temperature: (A) <u>0.9</u> °C / (C) <u>0.8</u> °C		Date/Time <u>5/23/2008</u> Analyst Init <u>EMR</u>	

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/608/8088										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ZINC										
MART KIT										
UMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: EMR Date/Time: 5/23/08  
 = Actual / C = Corrected Rev 21 05/23/2016  
 IS:\WPDoc\WordPerfect\LAB\_SCOCD\BML\LABFORMS\F2.PDF



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Bear Creek  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1916626-01</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/23/2019 22:00
	<b>Project Number:</b> Gallo Cattle Company Bear Creek	<b>Sampling Date:</b> 05/23/2019 13:17
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> BEA-MW1dd	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916626-02</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/23/2019 22:00
	<b>Project Number:</b> Gallo Cattle Company Bear Creek	<b>Sampling Date:</b> 05/23/2019 11:58
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> BEA-MW2dd	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916626-03</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/23/2019 22:00
	<b>Project Number:</b> Gallo Cattle Company Bear Creek	<b>Sampling Date:</b> 05/23/2019 12:46
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> BEA-MW3d	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916626-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/23/2019 22:00
	<b>Project Number:</b> Gallo Cattle Company Bear Creek	<b>Sampling Date:</b> 05/23/2019 12:26
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> BEA-MW4d	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Bear Creek  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916626-01	<b>Client Sample Name:</b> Gallo Cattle Company Bear Creek, BEA-MW1dd, 5/23/2019 1:17:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	ND	mg/L	0.10	0.042	EPA-300.0	ND		1
<b>Total Dissolved Solids @ 180 C</b>	<b>840</b>	<b>mg/L</b>	<b>50</b>	<b>25</b>	<b>SM-2540C</b>	ND		2
Ammonia as N	17	mg/L	4.0	1.3	EPA-350.1	ND	A07	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19	05:17	SAV	IC8	1	B047179
2	SM-2540C	05/30/19 15:00	05/30/19	15:00	CAD	MANUAL	5	B047527
3	EPA-350.1	06/07/19 15:00	06/10/19	16:02	JMH	SC-1	20	B048258

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500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Bear Creek  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916626-02	<b>Client Sample Name:</b> Gallo Cattle Company Bear Creek, BEA-MW2dd, 5/23/2019 11:58:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	12	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	600	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.073	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 05:38	SAV	IC8	1	B047179
2	SM-2540C	05/30/19 15:00	05/30/19 15:00	CAD	MANUAL	3.333	B047527
3	EPA-350.1	06/07/19 15:00	06/10/19 16:03	JMH	SC-1	1	B048258

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500 First Street  
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**Reported:** 06/12/2019 16:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Bear Creek  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916626-03	<b>Client Sample Name:</b> Gallo Cattle Company Bear Creek, BEA-MW3d, 5/23/2019 12:46:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	150	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2700	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.092	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 12:49		SAV	IC8	10	B047179
2	SM-2540C	05/30/19 15:00	05/30/19 15:00		CAD	MANUAL	10	B047527
3	EPA-350.1	06/07/19 15:00	06/10/19 16:04		JMH	SC-1	1	B048258

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Woodland, CA 95695

**Reported:** 06/12/2019 16:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Bear Creek  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916626-04	<b>Client Sample Name:</b> Gallo Cattle Company Bear Creek, BEA-MW4d, 5/23/2019 12:26:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	10	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	700	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	0.082	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 06:19	SAV	IC8	1	B047179
2	SM-2540C	05/30/19 15:00	05/30/19 15:00	CAD	MANUAL	3.333	B047527
3	EPA-350.1	06/07/19 15:00	06/10/19 16:04	JMH	SC-1	1	B048258

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Bear Creek  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047179</b>						
Nitrate as N	B047179-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047527</b>						
Total Dissolved Solids @ 180 C	B047527-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048258</b>						
Ammonia as N	B048258-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Bear Creek  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047179</b>										
Nitrate as N	B047179-BS1	LCS	5.2300	5.0000	mg/L	105		90 - 110		
<b>QC Batch ID: B047527</b>										
Total Dissolved Solids @ 180 C	B047527-BS1	LCS	560.00	586.00	mg/L	95.6		90 - 110		
<b>QC Batch ID: B048258</b>										
Ammonia as N	B048258-BS1	LCS	1.0087	1.0000	mg/L	101		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Bear Creek  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B047179</b>		Used client sample: N								
Nitrate as N	DUP	1916524-01	0.11400	0.11200		mg/L	1.8		10	
	MS	1916524-01	0.11400	5.2000	5.0505	mg/L		101		80 - 120
	MSD	1916524-01	0.11400	5.1838	5.0505	mg/L	0.3	100	10	80 - 120
<b>QC Batch ID: B047527</b>		Used client sample: Y - Description: BEA-MW1dd, 05/23/2019 13:17								
Total Dissolved Solids @ 180 C	DUP	1916626-01	840.00	840.00		mg/L	0		10	
<b>QC Batch ID: B048258</b>		Used client sample: N								
Ammonia as N	DUP	1916625-03	0.074200	ND		mg/L			10	
	MS	1916625-03	0.074200	1.2077	1.1111	mg/L		102		90 - 110
	MSD	1916625-03	0.074200	1.1543	1.1111	mg/L	4.5	97.2	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:07  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Bear Creek  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 06/17/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Gallo Cattle Co. Cottonwood

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916753

Invoice ID: B343573

Enclosed are the results of analyses for samples received by the laboratory on 5/24/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916753

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to:				Analysis Requested	
Name: Lufdorff and Sealmanini		Reduced Constituent Suite			
Address: 500 First Street		Project: Dairy Representative Monitoring Program			
City: Woodland		Gallo Cattle Company Cottonwood			
State: 95695		Samplers Name: DeFech Ashley Robinson			
Atrn: Till Angermann		Global ID - GADAIRY00006			
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qi/Pc Unpreserved
1	<del>COT-MW1d -1</del>	5/24/19	13:40	GW	x
2	COT-MW2				x
3	COT-MW3				x
4	COT-MW4				x
5	COT-MW5				x
6	COT-MW6				x
7	COT-MW7				x
8	COT-MW8				x
9	COT-MW9 -2	5/24/19	11:19	GW	x
10	COT-MW10 -3		11:40		x
11	COT-MW11d -4		13:17		x
12	COT-MW12d -5		12:52		x
13	COT-MW13d -6		13:34		x
14	COT-MW14d -7		12:02		x
15					
16					
17					
18					

  

From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids	From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids
--	--

  

SHORT HOLDING TIME Cr <sup>6</sup> NO <sub>2</sub> (NO <sub>3</sub> ) OP SS DO CH <sub>2</sub> SOD MBAS COT	Received By: [Signature] Date & Time: 5/24/19 15:40
CHK BY: [Signature]	Received By: [Signature] Date & Time: 5/24/19 21:00
DISTRIB. LIST	Received By: [Signature] Date & Time: 5/24/19 21:00

  

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Lufdorff and Sealmanini Consulting Engineers via email: llavagnino@lscce.com, rbryson@lscce.com, pdhall@lscce.com, jlovelis@lscce.com  
 4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-16753

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/24/2010

Temperature: (A) 2.6 °C / (C) 2.5 °C Analyst Init: EML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A			
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: EML Date/Time: 5-24-10 2:20 Rev 21 05/23/2016

A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916753-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	05/24/2019 13:48
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW1d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916753-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	05/24/2019 11:19
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW9	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916753-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	05/24/2019 11:40
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW10	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916753-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	05/24/2019 13:17
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW11d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916753-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	05/24/2019 12:52
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW12d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916753-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	05/24/2019 13:34
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW13d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916753-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/24/2019 21:00
	<b>Project Number:</b>	Gallo Cattle Company Cottonwood	<b>Sampling Date:</b>	05/24/2019 12:02
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COT-MW14d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916753-01	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW1d, 5/24/2019 1:48:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	47	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 20:00	05/24/19 23:00		KEB	IC5	5	B047282
2	SM-2540C	05/31/19 14:00	05/31/19 14:00		CAD	MANUAL	5	B047644
3	EPA-350.1	06/11/19 11:00	06/12/19 11:19		JMH	SC-1	1	B048482

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916753-02	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW9, 5/24/2019 11:19:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	51	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 20:00	05/25/19 00:11	SAV	IC5	5	B047282
2	SM-2540C	05/31/19 14:00	05/31/19 14:00	CAD	MANUAL	5	B047644
3	EPA-350.1	06/11/19 11:00	06/12/19 11:20	JMH	SC-1	1	B048482

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916753-03	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW10, 5/24/2019 11:40:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	15	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.086	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 20:00	05/25/19 00:29		SAV	IC5	2	B047282
2	SM-2540C	05/31/19 14:00	05/31/19 14:00		CAD	MANUAL	10	B047644
3	EPA-350.1	06/11/19 11:00	06/12/19 11:21		JMH	SC-1	1	B048482

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916753-04	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW11d, 5/24/2019 1:17:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	0.78	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	510	mg/L	20	10	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 20:00	05/25/19 00:47		SAV	IC5	1	B047282
2	SM-2540C	05/31/19 14:00	05/31/19 14:00		CAD	MANUAL	2	B047644
3	EPA-350.1	06/11/19 11:00	06/12/19 11:21		JMH	SC-1	1	B048482

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916753-05	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW12d, 5/24/2019 12:52:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	75	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 20:00	05/25/19 01:05		SAV	IC5	5	B047282
2	SM-2540C	05/31/19 14:00	05/31/19 14:00		CAD	MANUAL	5	B047644
3	EPA-350.1	06/11/19 11:00	06/12/19 11:23		JMH	SC-1	1	B048482

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916753-06	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW13d, 5/24/2019 1:34:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	53	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.067	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 20:00	05/25/19 02:53		SAV	IC5	5	B047282
2	SM-2540C	05/31/19 14:00	05/31/19 14:00		CAD	MANUAL	5	B047644
3	EPA-350.1	06/11/19 11:00	06/12/19 11:25		JMH	SC-1	1	B048482

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916753-07	<b>Client Sample Name:</b> Gallo Cattle Company Cottonwood, COT-MW14d, 5/24/2019 12:02:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	93	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.093	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 20:00	05/25/19 03:10	SAV	IC5	10	B047282
2	SM-2540C	05/31/19 14:00	05/31/19 14:00	CAD	MANUAL	10	B047644
3	EPA-350.1	06/11/19 11:00	06/12/19 11:26	JMH	SC-1	1	B048482

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047282</b>						
Nitrate as N	B047282-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047644</b>						
Total Dissolved Solids @ 180 C	B047644-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048482</b>						
Ammonia as N	B048482-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
Project: Dairy Representative Monitoring Program  
Project Number: Gallo Cattle Co. Cottonwood  
Project Manager: Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047282</b>										
Nitrate as N	B047282-BS1	LCS	4.9280	5.0000	mg/L	98.6		90 - 110		
<b>QC Batch ID: B047644</b>										
Total Dissolved Solids @ 180 C	B047644-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B048482</b>										
Ammonia as N	B048482-BS1	LCS	0.98190	1.0000	mg/L	98.2		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047282</b>		Used client sample: Y - Description: COT-MW1d, 05/24/2019 13:48								
Nitrate as N	DUP	1916753-01	46.900	48.095		mg/L	2.5		10	
	MS	1916753-01	46.900	74.131	25.253	mg/L		108		80 - 120
	MSD	1916753-01	46.900	74.303	25.253	mg/L	0.2	109	10	80 - 120
<b>QC Batch ID: B047644</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916748-01	955.00	935.00		mg/L	2.1		10	
<b>QC Batch ID: B048482</b>		Used client sample: N								
Ammonia as N	DUP	1917483-01	ND	0.077400		mg/L			10	J
	MS	1917483-01	ND	1.1064	1.1111	mg/L		99.6		90 - 110
	MSD	1917483-01	ND	1.0763	1.1111	mg/L	2.8	96.9	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/17/2019 9:37  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Co. Cottonwood  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 06/13/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Gallo Cattle Company Santa Rita

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916627

Invoice ID: B343333

Enclosed are the results of analyses for samples received by the laboratory on 5/23/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916627

Samples were filtered through a 0.45 micron filter prior to analysis.



**BC Laboratories, Inc.**  
4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

**Chain of Custody**

---

**Report to:**  
Reduced Constituent Suite  
Project: Dairy Representative Monitoring Program  
Site: Gallo Cattle Company Santa Rita  
Samplers Name: DelTech Ashley Putnam  
Global ID - GADAIRY00007

**Analysis Requested**

From Filtered Sample:  
Ammonia-N, NO3-N,  
Total Dissolved Solids

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1 Pe Unpreserved
1	<del>██████████</del> SAN-MW1d -1	5-23-19	15:56	GW	x
2	SAN-MW2s, SAN-MW2d	N/A			x
3	SAN-MW3s, SAN-MW3d	N/A			x
4	<del>██████████</del> SAN-MW4d -2	5-23-19	14:52	GW	x
5	<del>██████████</del> SAN-MW5d -3		15:23		x
6	<del>██████████</del> SAN-MW6d -4		17:20		x
7	<del>██████████</del> SAN-MW7d -5		16:52		x
8	<del>██████████</del> SAN-MW8d -6		16:20		x
9	<del>██████████</del>				
10					
11					
12					

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: ilavagnino@lscce.com, rlryson@lscce.com, pthallwal@lscce.com, jlovelis@lscce.com  
 4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).

(A) = Analysis (C) = Container (P) = Preservative

CHK BY: DISTRIBUTION  
 [Signature] INK  
 SUB OUT

Received by: [Signature] Date & Time: 5/23/19 18:10  
 Received by: [Signature] Date & Time: 5/23/19 22:00  
 Received by: [Signature] Date & Time: 5/23/19 22:00

Relinquished by: (Signature) [Signature] Date & Time: 5-23-19 / 18:10  
 Relinquished by: (Signature) [Signature]  
 Relinquished by: (Signature) [Signature]

SHORT FILING TIME  
 Cr<sup>3+</sup> NO<sub>2</sub> NO<sub>3</sub> OP SS  
 DC Cl<sub>2</sub> BOD MBAS COT

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-16627

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  Intact: Yes  No  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: YE Thermometer ID: 108 Date/Time: 5/23/200

Temperature: (A) 0.9 °C / (C) 0.8 °C Analyst Init: EMR

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A				
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>++</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531J										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TRODLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
MUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: WAR Date/Time: 5/23 2005 Rev 21 05/23/2016  
 = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916627-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Santa Rita	<b>Sampling Date:</b>	05/23/2019 15:56
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW1d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916627-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Santa Rita	<b>Sampling Date:</b>	05/23/2019 14:52
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW4d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916627-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Santa Rita	<b>Sampling Date:</b>	05/23/2019 15:23
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW5d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916627-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Santa Rita	<b>Sampling Date:</b>	05/23/2019 17:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW6d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916627-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Santa Rita	<b>Sampling Date:</b>	05/23/2019 16:52
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW7d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916627-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Gallo Cattle Company Santa Rita	<b>Sampling Date:</b>	05/23/2019 16:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	SAN-MW8d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916627-01	<b>Client Sample Name:</b> Gallo Cattle Company Santa Rita, SAN-MW1d, 5/23/2019 3:56:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	32	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 16:26	KEB	IC5	2	B047245
2	SM-2540C	05/30/19 15:00	05/30/19 15:00	CAD	MANUAL	10	B047527
3	EPA-350.1	06/10/19 10:00	06/11/19 12:00	JMH	SC-1	1	B048412

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Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916627-02	<b>Client Sample Name:</b> Gallo Cattle Company Santa Rita, SAN-MW4d, 5/23/2019 2:52:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	53	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.093	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 16:44		KEB	IC5	5	B047245
2	SM-2540C	05/30/19 15:00	05/30/19 15:00		CAD	MANUAL	5	B047527
3	EPA-350.1	06/10/19 10:00	06/11/19 12:04		JMH	SC-1	1	B048412

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Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916627-03	<b>Client Sample Name:</b> Gallo Cattle Company Santa Rita, SAN-MW5d, 5/23/2019 3:23:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	44	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 17:02		KEB	IC5	5	B047245
2	SM-2540C	05/29/19 15:00	05/29/19 15:00		CAD	MANUAL	5	B047436
3	EPA-350.1	06/10/19 10:00	06/11/19 12:05		JMH	SC-1	1	B048412

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Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916627-04	<b>Client Sample Name:</b> Gallo Cattle Company Santa Rita, SAN-MW6d, 5/23/2019 5:20:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	46	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 17:56		KEB	IC5	5	B047245
2	SM-2540C	05/29/19 15:00	05/29/19 15:00		CAD	MANUAL	5	B047436
3	EPA-350.1	06/10/19 10:00	06/11/19 12:07		JMH	SC-1	1	B048412

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Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916627-05	<b>Client Sample Name:</b> Gallo Cattle Company Santa Rita, SAN-MW7d, 5/23/2019 4:52:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	30	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 18:14		KEB	IC5	2	B047245
2	SM-2540C	05/29/19 15:00	05/29/19 15:00		CAD	MANUAL	5	B047436
3	EPA-350.1	06/10/19 10:00	06/11/19 12:09		JMH	SC-1	1	B048412

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Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916627-06	<b>Client Sample Name:</b> Gallo Cattle Company Santa Rita, SAN-MW8d, 5/23/2019 4:20:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	31	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1100	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 18:31		KEB	IC5	2	B047245
2	SM-2540C	05/29/19 15:00	05/29/19 15:00		CAD	MANUAL	5	B047436
3	EPA-350.1	06/10/19 10:00	06/11/19 12:09		JMH	SC-1	1	B048412

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047245</b>						
Nitrate as N	B047245-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047436</b>						
Total Dissolved Solids @ 180 C	B047436-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047527</b>						
Total Dissolved Solids @ 180 C	B047527-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048412</b>						
Ammonia as N	B048412-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047245</b>										
Nitrate as N	B047245-BS1	LCS	4.9830	5.0000	mg/L	99.7		90 - 110		
<b>QC Batch ID: B047436</b>										
Total Dissolved Solids @ 180 C	B047436-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B047527</b>										
Total Dissolved Solids @ 180 C	B047527-BS1	LCS	560.00	586.00	mg/L	95.6		90 - 110		
<b>QC Batch ID: B048412</b>										
Ammonia as N	B048412-BS1	LCS	1.0222	1.0000	mg/L	102		90 - 110		

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500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B047245</b>		Used client sample: Y - Description: SAN-MW1d, 05/23/2019 15:56								
Nitrate as N	DUP	1916627-01	31.984	31.808		mg/L	0.6		10	
	MS	1916627-01	31.984	42.206	10.101	mg/L		101	80 - 120	
	MSD	1916627-01	31.984	42.123	10.101	mg/L	0.2	100	10	80 - 120
<b>QC Batch ID: B047436</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916555-05	1220.0	1225.0		mg/L	0.4		10	
<b>QC Batch ID: B047527</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916626-01	840.00	840.00		mg/L	0		10	
<b>QC Batch ID: B048412</b>		Used client sample: Y - Description: SAN-MW1d, 05/23/2019 15:56								
Ammonia as N	DUP	1916627-01	ND	ND		mg/L			10	
	MS	1916627-01	ND	1.1726	1.1111	mg/L		106	90 - 110	
	MSD	1916627-01	ND	1.2146	1.1111	mg/L	3.5	109	10	90 - 110

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Woodland, CA 95695

**Reported:** 06/13/2019 9:26  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Gallo Cattle Company Santa Rita  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.

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Date of Report: 06/07/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Genasci Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1915997

Invoice ID: B342753

Enclosed are the results of analyses for samples received by the laboratory on 5/17/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915997

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		Chain of Custody			
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Analysis Requested			
<b>Name:</b> Luhdorff and Scalmanini <b>Address:</b> 500 First Street <b>City:</b> Woodland <b>State:</b> 95695 <b>CA:</b> <b>Attn:</b> Till Angermann		<b>From Filtered Sample:</b> Ammonia-N, NO3-N, Total Dissolved Solids			
<b>Report to:</b> Reduced Constituent Suite <b>Project:</b> Dairy Representative Monitoring Program <b>Site:</b> Genasol Dairy <b>Samplers Name:</b> Anthony Del-Tech <b>Global ID - WDR10037667</b>					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qi Pe Unpreserved
-1	GEN-MW1	5/17/19	1243	GW	x
-2	GEN-MW2		1516		x
-3	GEN-MW3		1223		x
-4	GEN-MW5		1537		x
-5	GEN-MW6		1311		x
-6	GEN-MW7		1553		x
-7	GEN-MW8		1452		x
-8	GEN-MW9		1431		x
-9	GEN-MW10		1351		x
-10	GEN-MW11s, GEN-MW11d		1411		x
-11	GEN-MW12s, GEN-MW12d		1327		x
-12	Field Duplicate # 1				x
13					
14					
15					

CHK BY: 668 DISTRIBUTION: MF SUB-OUT:   

SHORT-DURATION TIME: NO OP SS

Cr-6 NO2 MBAS COT

DO Cl2 BCF MBAS COT

Received By: <u>[Signature]</u>	Date & Time: <u>5/17/19 17:15</u>
Received by: <u>[Signature]</u>	Date & Time: <u>5/17/19 21:20</u>
Received by: <u>[Signature]</u>	Date & Time: <u>5/17/19 21:20</u>

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lsc.com, rbryson@lsc.com, pdhalkwa@lsc.com, jlovelle@lsc.com  
 4) Send invoices to Jeanette Lovell (jlovelle@lsc.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 2

Submission #: 19-15997

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Contain: YE Thermometer ID: 708 Date/Time: 5/17 2130

Temperature: (A) 2.4 °C / (C) 2.3 °C Analyst Init: EML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A	A	A
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/803										
QT EPA 515.1/815										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: WLR Date/Time: 5-17-14 MSA Rev 21 05/23

A = Actual / C = Corrected

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 2

Submission #: 1915997

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/17 2130  
 Temperature: (A) 2.4 °C / (C) 2.3 °C Analyst Init: WNL

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A								
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/6180										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8915M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLIEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: WNL Date/Time: 5-17-19 2254 Rev 21 05/23/2016

A = Actual / C = Corrected

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915997-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 12:48
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915997-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 15:16
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915997-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 12:23
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915997-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 15:37
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW5	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915997-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 13:11
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW6	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915997-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 15:53
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW7	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915997-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 14:52
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW8	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915997-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 14:31
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW9	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915997-09	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 13:51
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW10	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915997-10	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 14:11
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW11s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915997-11	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 13:27
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GEN-MW12s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915997-12	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Genasci Dairy	<b>Sampling Date:</b>	05/17/2019 00:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate #1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Antonio Morales of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-01	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW1, 5/17/2019 12:48:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	2.9	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	2.0	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 00:18		KEB	IC1	2	B046691
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	10	B046934
3	EPA-350.1	06/03/19 10:00	06/04/19 16:14		JMH	SC-1	1	B047791

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-02	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW2, 5/17/2019 3:16:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	56	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 23:00	05/17/19 23:57		KEB	IC1	5	B046691
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	10	B046934
3	EPA-350.1	06/03/19 10:30	06/04/19 16:11		JMH	SC-1	1	B047791

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-03	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW3, 5/17/2019 12:23:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	40	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	5800	mg/L	500	250	SM-2540C	ND		2
Ammonia as N	0.33	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 00:39		KEB	IC1	2	B046691
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	50	B046934
3	EPA-350.1	06/03/19 10:30	06/04/19 16:16		JMH	SC-1	1	B047791

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500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-04	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW5, 5/17/2019 3:37:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	100	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 01:00		KEB	IC1	10	B046691
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	5	B046934
3	EPA-350.1	06/03/19 10:30	06/04/19 16:18		JMH	SC-1	1	B047791

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500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-05	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW6, 5/17/2019 1:11:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	84	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 15:09		KEB	IC1	5	B046691
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	5	B046934
3	EPA-350.1	06/03/19 10:30	06/04/19 16:19		JMH	SC-1	1	B047791

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Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-06	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW7, 5/17/2019 3:53:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	31	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	670	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 01:42		KEB	IC1	5	B046691
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	3.333	B046934
3	EPA-350.1	06/03/19 10:30	06/04/19 16:20		JMH	SC-1	1	B047791

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**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-07	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW8, 5/17/2019 2:52:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	77	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2800	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	48	mg/L	10	3.4	EPA-350.1	ND	A07	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 15:30	KEB	IC1	5	B046691
2	SM-2540C	05/22/19 12:00	05/22/19 12:00	CAD	MANUAL	20	B046934
3	EPA-350.1	06/03/19 10:30	06/04/19 16:21	JMH	SC-1	50	B047791

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**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-08	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW9, 5/17/2019 2:31:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	89	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.14	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 02:24		KEB	IC1	5	B046691
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	5	B046934
3	EPA-350.1	06/03/19 10:30	06/04/19 16:22		JMH	SC-1	1	B047791

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**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-09	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW10, 5/17/2019 1:51:00PM, Antonio Morales
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	58	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.10	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 04:09		KEB	IC1	5	B046691
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	10	B046934
3	EPA-350.1	06/03/19 10:30	06/04/19 16:23		JMH	SC-1	1	B047791

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500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-10	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW11s, 5/17/2019 2:11:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	110	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.21	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 04:30		KEB	IC1	10	B046691
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	5	B046934
3	EPA-350.1	06/03/19 10:30	06/04/19 16:23		JMH	SC-1	1	B047791

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500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-11	<b>Client Sample Name:</b> Genasci Dairy, GEN-MW12s, 5/17/2019 1:27:00PM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	57	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	980	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 04:51	KEB	IC1	5	B046692
2	SM-2540C	05/22/19 12:00	05/22/19 12:00	CAD	MANUAL	5	B046933
3	EPA-350.1	06/03/19 11:00	06/04/19 14:46	JMH	SC-1	1	B047792

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500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915997-12	<b>Client Sample Name:</b> Genasci Dairy, Field Duplicate #1, 5/17/2019 12:00:00AM, Antonio Morales
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	58	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.14	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 23:00	05/18/19 05:12		KEB	IC1	5	B046692
2	SM-2540C	05/22/19 12:00	05/22/19 12:00		CAD	MANUAL	10	B046933
3	EPA-350.1	06/03/19 11:00	06/04/19 14:58		JMH	SC-1	1	B047792

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Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046691</b>						
Nitrate as N	B046691-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046692</b>						
Nitrate as N	B046692-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046933</b>						
Total Dissolved Solids @ 180 C	B046933-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B046934</b>						
Total Dissolved Solids @ 180 C	B046934-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047791</b>						
Ammonia as N	B047791-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B047792</b>						
Ammonia as N	B047792-BLK1	ND	mg/L	0.20	0.067	

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Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B046691</b>										
Nitrate as N	B046691-BS1	LCS	5.1660	5.0000	mg/L	103		90 - 110		
<b>QC Batch ID: B046692</b>										
Nitrate as N	B046692-BS1	LCS	4.8700	5.0000	mg/L	97.4		90 - 110		
<b>QC Batch ID: B046933</b>										
Total Dissolved Solids @ 180 C	B046933-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B046934</b>										
Total Dissolved Solids @ 180 C	B046934-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B047791</b>										
Ammonia as N	B047791-BS1	LCS	0.94350	1.0000	mg/L	94.4		90 - 110		
<b>QC Batch ID: B047792</b>										
Ammonia as N	B047792-BS1	LCS	0.99640	1.0000	mg/L	99.6		90 - 110		

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Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B046691</b>		Used client sample: Y - Description: GEN-MW2, 05/17/2019 15:16								
Nitrate as N	DUP	1915997-02	55.570	56.625		mg/L	1.9		10	
	MS	1915997-02	55.570	82.187	25.253	mg/L		105		80 - 120
	MSD	1915997-02	55.570	81.939	25.253	mg/L	0.3	104	10	80 - 120
<b>QC Batch ID: B046692</b>		Used client sample: Y - Description: GEN-MW12s, 05/17/2019 13:27								
Nitrate as N	DUP	1915997-11	56.665	56.660		mg/L	0.0		10	
	MS	1915997-11	56.665	81.551	25.253	mg/L		98.5		80 - 120
	MSD	1915997-11	56.665	81.571	25.253	mg/L	0.0	98.6	10	80 - 120
<b>QC Batch ID: B046933</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1915995-01	960.00	975.00		mg/L	1.6		10	
<b>QC Batch ID: B046934</b>		Used client sample: Y - Description: GEN-MW1, 05/17/2019 12:48								
Total Dissolved Solids @ 180 C	DUP	1915997-01	1850.0	1880.0		mg/L	1.6		10	
<b>QC Batch ID: B047791</b>		Used client sample: Y - Description: GEN-MW2, 05/17/2019 15:16								
Ammonia as N	DUP	1915997-02	ND	ND		mg/L			10	
	MS	1915997-02	ND	1.0446	1.1111	mg/L		94.0		90 - 110
	MSD	1915997-02	ND	1.1088	1.1111	mg/L	6.0	99.8	10	90 - 110
<b>QC Batch ID: B047792</b>		Used client sample: Y - Description: GEN-MW12s, 05/17/2019 13:27								
Ammonia as N	DUP	1915997-11	ND	ND		mg/L			10	
	MS	1915997-11	ND	1.1253	1.1111	mg/L		101		90 - 110
	MSD	1915997-11	ND	1.2000	1.1111	mg/L	6.4	108	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Genasci Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 06/07/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: J. Troost Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916148

Invoice ID: B342754

Enclosed are the results of analyses for samples received by the laboratory on 5/20/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916148

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b> 19-16148		<b>Chain of Custody</b> 4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911			
<b>Report to:</b>					
<b>Reduced Constituent Suite</b>					
Name: Luhdorff and Scalmanini Address: 500 First Street City: Woodland State: 95695 CA Attn: Till Angermann					
Project: Dairy Representative Monitoring Program Site: J. Troest Dairy Samplers Name: DelTech/Ashley Potnam Global ID - WDR100038424					
<b>Analysis Requested</b>					
From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qt/Pc Unpreserved
- 1	TRO-MW1	5-20-19	1455	AW	x
- 2	TRO-MW2	d	1600	d	x
- 3	TRO-MW3	d	1543	d	x
4	<del>Wells Discontinued</del>				
5					
6					
7					
8					
9					
10					
11					
12					

**SHORT HOLDING TIME**  
 Cr<sup>6</sup> NO<sub>2</sub> NO<sub>3</sub> UP SS  
 DO Cl<sub>2</sub> BOD MBAS COT

**CHK BY**  **DISTRIBUTION**   
 **SUB OUT**

Relinquished by: (Signature) <i>Johney Potnam</i>	19:15	5/20/19	19:15
Relinquished by: (Signature) <i>Johney Potnam</i>			
Relinquished by: (Signature) <i>Johney Potnam</i>			

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lscce.com, rbryson@lscce.com, pdhalliwal@lscce.com, jlovelis@lscce.com  
 4) Send invoices to Jeannette Lovellis (jlovelis@lscce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-16148

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO

Emissivity: 0.98 Container: PE Thermometer ID: P 208 Date/Time: 5/20/2000

Temperature: (A) 1.6 °C / (C) 1.5 °C Analyst Init: EPC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GAB Date/Time: 5-20-19

A = Actual / C = Corrected

Rev 21 06/23/2016  
 (S:\WP\Doc\Wor\Perfect\LAB\_DOC\7DFRMS15AMREC\rev 21)



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916148-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/20/2019 22:00
	<b>Project Number:</b>	J. Troost Dairy	<b>Sampling Date:</b>	05/20/2019 14:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TRO-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916148-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/20/2019 22:00
	<b>Project Number:</b>	J. Troost Dairy	<b>Sampling Date:</b>	05/20/2019 16:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TRO-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916148-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/20/2019 22:00
	<b>Project Number:</b>	J. Troost Dairy	<b>Sampling Date:</b>	05/20/2019 15:43
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TRO-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916148-01	<b>Client Sample Name:</b> J. Troost Dairy, TRO-MW1, 5/20/2019 2:55:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	13	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	640	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/20/19 21:00	05/21/19 05:05	SAV	IC8	1	B046871
2	SM-2540C	05/24/19 13:00	05/24/19 13:00	CAD	MANUAL	5	B047154
3	EPA-350.1	06/03/19 15:00	06/04/19 16:27	JMH	SC-1	1	B047866

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916148-02	<b>Client Sample Name:</b> J. Troost Dairy, TRO-MW2, 5/20/2019 4:10:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	89	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/20/19 21:00	05/21/19 06:27		SAV	IC8	10	B046871
2	SM-2540C	05/24/19 13:00	05/24/19 13:00		CAD	MANUAL	5	B047154
3	EPA-350.1	06/03/19 15:00	06/04/19 16:32		JMH	SC-1	1	B047866

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916148-03	<b>Client Sample Name:</b> J. Troost Dairy, TRO-MW3, 5/20/2019 3:43:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	33	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	660	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/20/19 21:00	05/21/19 06:48	SAV	IC8	5	B046871
2	SM-2540C	05/24/19 13:00	05/24/19 13:00	CAD	MANUAL	3.333	B047154
3	EPA-350.1	06/03/19 15:00	06/04/19 16:32	JMH	SC-1	1	B047866

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**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046871</b>						
Nitrate as N	B046871-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047154</b>						
Total Dissolved Solids @ 180 C	B047154-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047866</b>						
Ammonia as N	B047866-BLK1	ND	mg/L	0.20	0.067	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046871</b>										
Nitrate as N	B046871-BS1	LCS	5.2230	5.0000	mg/L	104		90 - 110		
<b>QC Batch ID: B047154</b>										
Total Dissolved Solids @ 180 C	B047154-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B047866</b>										
Ammonia as N	B047866-BS1	LCS	0.94610	1.0000	mg/L	94.6		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
<b>QC Batch ID: B046871</b>		Used client sample: Y - Description: TRO-MW1, 05/20/2019 14:55									
Nitrate as N	DUP	1916148-01	12.727	12.808		mg/L	0.6		10		
	MS	1916148-01	12.727	17.794	5.0505	mg/L		100		80 - 120	
	MSD	1916148-01	12.727	17.870	5.0505	mg/L	0.4	102	10	80 - 120	
<b>QC Batch ID: B047154</b>		Used client sample: Y - Description: TRO-MW1, 05/20/2019 14:55									
Total Dissolved Solids @ 180 C	DUP	1916148-01	635.00	625.00		mg/L	1.6		10		
<b>QC Batch ID: B047866</b>		Used client sample: Y - Description: TRO-MW1, 05/20/2019 14:55									
Ammonia as N	DUP	1916148-01	ND	ND		mg/L			10		
	MS	1916148-01	ND	1.1391	1.1111	mg/L		103		90 - 110	
	MSD	1916148-01	ND	1.1429	1.1111	mg/L	0.3	103	10	90 - 110	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/07/2019 12:16  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** J. Troost Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.

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Date of Report: 06/10/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: P & L Souza Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916315

Invoice ID: B342896

Enclosed are the results of analyses for samples received by the laboratory on 5/22/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916315

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		Chain of Custody	
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Analysis Requested	
Report to: Reduced Constituent Suite			
Project: Dairy Representative Monitoring Program			
Site: P & L Souza Dairy 20 2019			
Samplers Name: Ad Tech / Steg Light			
Global ID - GADAIRY00008			
From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids			
SHOR-T HOLDING TIME C-0 NO2 (NO) CP SS DO CL BOD MBAS COT			
CHK BY DISTRIBUTION (Signature)			
SUB-OUT			
Received By: (Signature) Date & Time: 5/21/19 16:05			
Received By: (Signature) Date & Time: 5/21/19 22:00			
Relinquished by: (Signature)			
Relinquished by: (Signature)			
Relinquished by: (Signature)			
Comments: 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Lunderoff and Scalmanini Consulting Engineers via email: llavagnino@liscoe.com, rboyson@liscoe.com, pohnatal@liscoe.com, jlovelis@liscoe.com 4) Send invoices to Jeanette Lovelis (jlovelis@liscoe.com).			
(A)= Analysis (C)= Container (P)= Preservative			

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-16315

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/21/2016 Analyst Init: BSP

Temperature: (A) 0.6 °C / (C) 0.7 °C

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/509/5030										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TRDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: WJ Date/Time: 5-21-19 2210 Rev 21 05/23/2016

A = Actual / C = Corrected

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916315-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	P & L Souza	<b>Sampling Date:</b>	05/21/2019 15:13
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916315-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	P & L Souza	<b>Sampling Date:</b>	05/21/2019 14:48
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916315-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	P & L Souza	<b>Sampling Date:</b>	05/21/2019 15:59
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916315-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	P & L Souza	<b>Sampling Date:</b>	05/21/2019 14:23
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916315-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	P & L Souza	<b>Sampling Date:</b>	05/21/2019 15:38
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916315-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	P & L Souza	<b>Sampling Date:</b>	05/21/2019 13:52
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916315-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	P & L Souza	<b>Sampling Date:</b>	05/21/2019 13:26
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	PLS-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916315-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	P & L Souza	<b>Sampling Date:</b>	05/21/2019 00:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916315-01	<b>Client Sample Name:</b> P & L Souza, PLS-MW1s, 5/21/2019 3:13:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	83	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.20	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 01:00	05/22/19	05:27	TMS	IC1	10	B046971
2	SM-2540C	05/24/19 14:30	05/24/19	14:30	CAD	MANUAL	10	B047157
3	EPA-350.1	06/05/19 11:00	06/06/19	14:55	JMH	SC-1	1	B047985

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916315-02	<b>Client Sample Name:</b> P & L Souza, PLS-MW2s, 5/21/2019 2:48:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	89	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2100	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.22	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 01:00	05/22/19 06:52		TMS	IC1	5	B046971
2	SM-2540C	05/24/19 14:30	05/24/19 14:30		CAD	MANUAL	10	B047157
3	EPA-350.1	06/05/19 11:00	06/06/19 14:56		JMH	SC-1	1	B047985

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916315-03	<b>Client Sample Name:</b> P & L Souza, PLS-MW3s, 5/21/2019 3:59:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	45	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.24	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 01:00	05/22/19 07:13		TMS	IC1	5	B046971
2	SM-2540C	05/24/19 14:30	05/24/19 14:30		CAD	MANUAL	5	B047157
3	EPA-350.1	06/05/19 11:00	06/06/19 14:57		JMH	SC-1	1	B047985

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500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916315-04	<b>Client Sample Name:</b> P & L Souza, PLS-MW4s, 5/21/2019 2:23:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	32	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2800	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.31	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 01:00	05/22/19 07:34		TMS	IC1	5	B046971
2	SM-2540C	05/24/19 14:30	05/24/19 14:30		CAD	MANUAL	20	B047157
3	EPA-350.1	06/05/19 11:00	06/06/19 14:58		JMH	SC-1	1	B047985

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500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916315-05	<b>Client Sample Name:</b> P & L Souza, PLS-MW5s, 5/21/2019 3:38:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	71	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.18	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 01:00	05/22/19 07:55		TMS	IC1	5	B046971
2	SM-2540C	05/24/19 14:30	05/24/19 14:30		CAD	MANUAL	5	B047157
3	EPA-350.1	06/05/19 11:00	06/06/19 14:58		JMH	SC-1	1	B047985

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916315-06	<b>Client Sample Name:</b> P & L Souza, PLS-MW6s, 5/21/2019 1:52:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	43	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.18	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 01:00	05/22/19 09:40		SAV	IC1	5	B046971
2	SM-2540C	05/24/19 14:30	05/24/19 14:30		CAD	MANUAL	10	B047157
3	EPA-350.1	06/05/19 11:00	06/06/19 15:00		JMH	SC-1	1	B047985

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916315-07	<b>Client Sample Name:</b> P & L Souza, PLS-MW7s, 5/21/2019 1:26:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	130	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.96	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 01:00	05/22/19	10:01	SAV	IC1	10	B046971
2	SM-2540C	05/24/19 14:30	05/24/19	14:30	CAD	MANUAL	10	B047157
3	EPA-350.1	06/05/19 11:00	06/06/19	15:00	JMH	SC-1	1	B047985

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916315-08	<b>Client Sample Name:</b> P & L Souza, Field Duplicate, 5/21/2019 12:00:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	130	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.83	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 01:00	05/22/19	12:28	SAV	IC1	10	B046971
2	SM-2540C	05/24/19 14:30	05/24/19	14:30	CAD	MANUAL	10	B047157
3	EPA-350.1	06/05/19 11:00	06/06/19	13:06	JMH	SC-1	1	B047986

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046971</b>						
Nitrate as N	B046971-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047157</b>						
Total Dissolved Solids @ 180 C	B047157-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047985</b>						
Ammonia as N	B047985-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B047986</b>						
Ammonia as N	B047986-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046971</b>										
Nitrate as N	B046971-BS1	LCS	5.1270	5.0000	mg/L	103		90 - 110		
<b>QC Batch ID: B047157</b>										
Total Dissolved Solids @ 180 C	B047157-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B047985</b>										
Ammonia as N	B047985-BS1	LCS	1.0683	1.0000	mg/L	107		90 - 110		
<b>QC Batch ID: B047986</b>										
Ammonia as N	B047986-BS1	LCS	1.0420	1.0000	mg/L	104		90 - 110		

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Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046971</b>		Used client sample: Y - Description: PLS-MW1s, 05/21/2019 15:13								
Nitrate as N	DUP	1916315-01	82.980	83.260		mg/L	0.3		10	
	MS	1916315-01	82.980	136.43	50.505	mg/L		106		80 - 120
	MSD	1916315-01	82.980	135.64	50.505	mg/L	0.6	104	10	80 - 120
<b>QC Batch ID: B047157</b>		Used client sample: Y - Description: PLS-MW1s, 05/21/2019 15:13								
Total Dissolved Solids @ 180 C	DUP	1916315-01	1540.0	1530.0		mg/L	0.7		10	
<b>QC Batch ID: B047985</b>		Used client sample: N								
Ammonia as N	DUP	1915950-01	0.76400	0.76900		mg/L	0.7		10	
	MS	1915950-01	0.76400	1.9502	1.1111	mg/L		107		90 - 110
	MSD	1915950-01	0.76400	1.9596	1.1111	mg/L	0.5	108	10	90 - 110
<b>QC Batch ID: B047986</b>		Used client sample: Y - Description: Field Duplicate, 05/21/2019 00:00								
Ammonia as N	DUP	<b>1916315-08</b>	<b>0.83190</b>	<b>0.79860</b>		mg/L	<b>4.1</b>		<b>10</b>	
	MS	<b>1916315-08</b>	<b>0.83190</b>	<b>2.0683</b>	1.1111	mg/L		111		90 - 110 Q03
	MSD	<b>1916315-08</b>	<b>0.83190</b>	<b>2.0664</b>	1.1111	mg/L	0.1	111	10	90 - 110 Q03

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 12:38  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** P & L Souza Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 06/05/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Paul Caetano Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1915994

Invoice ID: B342460

Enclosed are the results of analyses for samples received by the laboratory on 5/17/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1915994

Samples were filtered through a 0.45 micron filter prior to analysis.



19-15994

BC Laboratories, Inc.		Chain of Custody			
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Analysis Requested			
Report to: Reduced Constituent Suite					
Name: Luhdorff and Scalmani	Project: Dairy Representative Monitoring Program				
Address: 500 First Street	Site: Paul Caetano Dairy				
City: Woodland	Samplers Name: DetTech Ashley Potham				
State: 95695	Global ID - GADAIRY00009				
Attn: Till Angermann	From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids				
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1 Pe Unpreserved
-1	<del>CAE-MW1d</del> , CAE-MW1d	5-17-19	14:30	AW	x
-2	<del>CAE-MW2d</del> , CAE-MW2d		15:05		x
-3	CAE-MW3s, <del>CAE-MW3d</del>		15:20		x
-4	CAE-MW4s, <del>CAE-MW4d</del>		14:12		x
-5	CAE-MW5s, <del>CAE-MW5d</del>		13:30		x
-6	CAE-MW6s, <del>CAE-MW6d</del>		13:52		x
7	<del>Strike out non-sampled wells</del>				
8					
9					
10					
11					
12					

SHORT HOLDING TIME

Cr<sup>6+</sup> NO<sub>2</sub> NO<sub>3</sub> OP SS

DO Cl<sub>2</sub> BOD MBAS COT

CHKBY DISTRIBUTION

6SA NW

SUB OUT

Received By: [Signature] Date & Time: 5/17/19 16:05

Received By: [Signature] Date & Time: 5/17/19 2:30

Received By: [Signature] Date & Time: 5/17/19 2:30

Relinquished by: (Signature) [Signature] 5-17-19 16:05

Relinquished by: (Signature) [Signature]

Relinquished by: (Signature) [Signature]

Comments:

1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.

2) Lab reports shall identify sampled wells exactly as shown on this CoC.

3) Send lab reports to Luhdorff and Scalmani Consulting Engineers via email: llsvegn@lscce.com, rbyson@lscce.com, pdhall@lscce.com, jlovelis@lscce.com

4) Send invoices to Jeannette Lovelis (jlovelis@lscce.com).

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-15994

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 708 Date/Time: 5/17 2:30

Temperature: (A) 1.6 °C / (C) 1.5 °C Analyst Init: EMM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A				
4oz / 8oz / 16oz - PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1464										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/508/509										
QT EPA 515.1/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: Bottle reads "BET MW-35" for -3 however it does have a similar color to the other bottles.

Sample Numbering Completed By: EMM Date/Time: 5-17-19 2241 Rev 21 05/23/2016

A = Actual / C = Corrected

IS:\WPDoc\Work\Perfect\LAB\_DOC\2222\SASAMREC1ev 211



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915994-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	05/17/2019 14:36
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW1d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915994-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	05/17/2019 15:05
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW2d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915994-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	05/17/2019 15:26
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915994-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	05/17/2019 14:12
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1915994-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	05/17/2019 13:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1915994-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/17/2019 21:30
	<b>Project Number:</b>	Paul Caetano Dairy	<b>Sampling Date:</b>	05/17/2019 13:52
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	CAE-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915994-01	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW1d, 5/17/2019 2:36:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	21	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	130	mg/L	50	17	EPA-350.1	ND	A07	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 16:00	05/17/19 22:22		KEB	IC8	2	B046614
2	SM-2540C	05/22/19 13:00	05/22/19 13:00		CAD	MANUAL	10	B046935
3	EPA-350.1	05/31/19 12:00	06/03/19 14:41		JMH	SC-1	250	B047663

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915994-02	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW2d, 5/17/2019 3:05:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	44	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	820	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.19	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 16:00	05/17/19 22:42		KEB	IC8	5	B046614
2	SM-2540C	05/22/19 13:00	05/22/19 13:00		CAD	MANUAL	5	B046935
3	EPA-350.1	05/31/19 12:00	06/03/19 14:09		JMH	SC-1	1	B047663

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915994-03	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW3s, 5/17/2019 3:26:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	30	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.41	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/17/19 16:00	05/17/19 23:03	KEB	IC8	5	B046614
2	SM-2540C	05/22/19 13:00	05/22/19 13:00	CAD	MANUAL	10	B046935
3	EPA-350.1	05/31/19 12:00	06/03/19 14:11	JMH	SC-1	1	B047663

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915994-04	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW4s, 5/17/2019 2:12:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	210	mg/L	2.0	0.84	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	2800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.28	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/17/19 16:00	05/18/19 21:13	KEB	IC8	20	B046614
2	SM-2540C	05/22/19 13:00	05/22/19 13:00	CAD	MANUAL	10	B046935
3	EPA-350.1	05/31/19 12:00	06/03/19 14:11	JMH	SC-1	1	B047663

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500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915994-05	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW5s, 5/17/2019 1:30:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	70	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	920	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.12	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 16:00	05/17/19 23:44		KEB	IC8	5	B046614
2	SM-2540C	05/22/19 13:00	05/22/19 13:00		CAD	MANUAL	5	B046935
3	EPA-350.1	05/31/19 12:00	06/03/19 14:13		JMH	SC-1	1	B047663

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Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1915994-06	<b>Client Sample Name:</b> Paul Caetano Dairy, CAE-MW6s, 5/17/2019 1:52:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	120	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.16	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/17/19 16:00	05/18/19 00:04		KEB	IC8	10	B046614
2	SM-2540C	05/22/19 13:00	05/22/19 13:00		CAD	MANUAL	5	B046935
3	EPA-350.1	05/31/19 12:00	06/03/19 14:13		JMH	SC-1	1	B047663

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046614</b>						
Nitrate as N	B046614-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B046935</b>						
Total Dissolved Solids @ 180 C	B046935-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047663</b>						
Ammonia as N	B047663-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
Project: Dairy Representative Monitoring Program  
Project Number: Paul Caetano Dairy  
Project Manager: Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046614</b>										
Nitrate as N	B046614-BS1	LCS	4.9510	5.0000	mg/L	99.0		90 - 110		
<b>QC Batch ID: B046935</b>										
Total Dissolved Solids @ 180 C	B046935-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B047663</b>										
Ammonia as N	B047663-BS1	LCS	1.0039	1.0000	mg/L	100		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B046614</b>		Used client sample: N								
Nitrate as N	DUP	1915886-01	0.66000	0.66700		mg/L	1.1		10	
	MS	1915886-01	0.66000	5.7535	5.0505	mg/L		101		80 - 120
	MSD	1915886-01	0.66000	5.7747	5.0505	mg/L	0.4	101	10	80 - 120
<b>QC Batch ID: B046935</b>		Used client sample: Y - Description: CAE-MW1d, 05/17/2019 14:36								
Total Dissolved Solids @ 180 C	DUP	1915994-01	1500.0	1540.0		mg/L	2.6		10	
<b>QC Batch ID: B047663</b>		Used client sample: N								
Ammonia as N	DUP	1917216-02	0.16830	0.15250		mg/L	9.9		10	J
	MS	1917216-02	0.16830	1.0368	1.1111	mg/L		78.2		90 - 110 Q03
	MSD	1917216-02	0.16830	1.1247	1.1111	mg/L	8.1	86.1	10	90 - 110 Q03

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/05/2019 14:00  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Paul Caetano Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.







Date of Report: 06/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Robert Gioletti & Sons Dairy  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1916314  
Invoice ID: B343192

Enclosed are the results of analyses for samples received by the laboratory on 5/21/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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#### Water Analysis (General Chemistry)

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## Case Narratives

### Case Narrative for Work Order 1916314

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to:			Analysis Requested		
Name: Luhdorff and Scalmanini			From Filtered Sample:		
Address: 500 First Street			Ammonia-N, NO3-N, Total Dissolved Solids		
City: Woodland					
State: 95695					
Attn: Till Angermann					
Project: Dairy Representative Monitoring Program					
Site: Robert Gioielli & Sons Dairy					
Samplers Name: <i>Del Teck / Steynght</i>					
Global ID - GADAIRY00010					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl Pe Unpreserved
-1	<del>ROB-MW1s, ROB-MW2s, ROB-MW3s, ROB-MW4s, ROB-MW5s, ROB-MW6s, ROB-MW7s, ROB-MW8s</del>	5-21-19	10:47	GW	x
-2	<del>ROB-MW1s, ROB-MW2s, ROB-MW3s, ROB-MW4s, ROB-MW5s, ROB-MW6s, ROB-MW7s, ROB-MW8s</del>		11:12		x
-3	<del>ROB-MW1s, ROB-MW2s, ROB-MW3s, ROB-MW4s, ROB-MW5s, ROB-MW6s, ROB-MW7s, ROB-MW8s</del>		11:35		x
-4	<del>ROB-MW1s, ROB-MW2s, ROB-MW3s, ROB-MW4s, ROB-MW5s, ROB-MW6s, ROB-MW7s, ROB-MW8s</del>		11:57		x
-5	<del>ROB-MW1s, ROB-MW2s, ROB-MW3s, ROB-MW4s, ROB-MW5s, ROB-MW6s, ROB-MW7s, ROB-MW8s</del>		12:23		x
-6	<del>ROB-MW1s, ROB-MW2s, ROB-MW3s, ROB-MW4s, ROB-MW5s, ROB-MW6s, ROB-MW7s, ROB-MW8s</del>		9:30		x
-7	<del>ROB-MW1s, ROB-MW2s, ROB-MW3s, ROB-MW4s, ROB-MW5s, ROB-MW6s, ROB-MW7s, ROB-MW8s</del>		9:53		x
-8	<del>ROB-MW1s, ROB-MW2s, ROB-MW3s, ROB-MW4s, ROB-MW5s, ROB-MW6s, ROB-MW7s, ROB-MW8s</del>		10:20		x
-9	Field Duplicate #2		N/A		x
10					
11					
12					

SHORT HOLDING TIME  
 Cr<sup>6</sup> NO<sub>3</sub> (NO) OP SS  
 DO Cl<sub>2</sub> SDC MBAS COT

CHK BY DISTRIBUTION  
 GSA/NAI  
 SUB OUT

Received By: *[Signature]* Date & Time: 5/21/19 16:05

Received By: *[Signature]* Date & Time: 5/21/19 22:00

Relinquished by: (Signature) *[Signature]*

Relinquished by: (Signature) *[Signature]*

Relinquished by: (Signature) *[Signature]*

Comments:

1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.

2) Lab reports shall identify sampled wells exactly as shown on this CoC.

3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lisce.com, rbyson@lisce.com, puthallival@lisce.com, jlovelis@lisce.com

4) Send invoices to Jeanette Lovelis (jlovelis@lisce.com).

(A)= Analysis (C)= ContAINER (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-16314

SHIPPING INFORMATION		SHIPPING CONTAINER		FREE LIQUID
Fed Ex <input type="checkbox"/>	UPS <input checked="" type="checkbox"/>	Ontrac <input type="checkbox"/>	Hand Delivery <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
BC Lab Field Service <input checked="" type="checkbox"/>		Other <input type="checkbox"/> (Specify) _____		W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO

Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/21/2000

Temperature: (A) 0.6 °C / (C) 0.7 °C Analyst Init: BSP

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A	A	
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/038/030										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: GW Date/Time: 5-21-19 2210 Rev 21 05/23/2016

A = Actual / C = Corrected

IS:\WP\Doc\WordPerfect\LAB\_DOC\FORMS\SIAMRECRev 20



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:31  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1916314-01	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b> 05/21/2019 10:47
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	ROB-MW1s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916314-02	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b> 05/21/2019 11:12
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	ROB-MW2s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916314-03	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b> 05/21/2019 11:35
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	ROB-MW3s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916314-04	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b> 05/21/2019 11:57
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	ROB-MW4s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916314-05	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b>	Robert Gioletti & Sons Dairy	<b>Sampling Date:</b> 05/21/2019 12:23
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	ROB-MW5s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

**Reported:** 06/12/2019 11:31  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1916314-06</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b> Robert Gioletti & Sons Dairy	<b>Sampling Date:</b> 05/21/2019 09:30
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ROB-MW6s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916314-07</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b> Robert Gioletti & Sons Dairy	<b>Sampling Date:</b> 05/21/2019 09:53
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ROB-MW7s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916314-08</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b> Robert Gioletti & Sons Dairy	<b>Sampling Date:</b> 05/21/2019 10:20
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> ROB-MW8s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916314-09</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b> Robert Gioletti & Sons Dairy	<b>Sampling Date:</b> 05/21/2019 00:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Field Duplicate #2	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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**Reported:** 06/12/2019 11:31  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916314-01	<b>Client Sample Name:</b> Robert Gioletti & Sons Dairy, ROB-MW1s, 5/21/2019 10:47:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	93	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	52	mg/L	10	3.4	EPA-350.1	ND	A07	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/21/19 23:30	05/22/19 03:03	TMS	IC8	5	B046983
2	SM-2540C	05/24/19 16:30	05/24/19 16:30	CAD	MANUAL	10	B047167
3	EPA-350.1	06/03/19 15:00	06/04/19 16:37	JMH	SC-1	50	B047866

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**Reported:** 06/12/2019 11:31  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916314-02	<b>Client Sample Name:</b> Robert Gioletti & Sons Dairy, ROB-MW2s, 5/21/2019 11:12:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	150	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2600	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.13	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/21/19 23:30	05/22/19 04:25	TMS	IC8	10	B046983
2	SM-2540C	05/24/19 16:30	05/24/19 16:30	CAD	MANUAL	10	B047167
3	EPA-350.1	06/03/19 15:00	06/04/19 16:40	JMH	SC-1	1	B047866

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**Reported:** 06/12/2019 11:31  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916314-03	<b>Client Sample Name:</b> Robert Gioletti & Sons Dairy, ROB-MW3s, 5/21/2019 11:35:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	48	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/21/19 23:30	05/22/19 04:45		TMS	IC8	5	B046983
2	SM-2540C	05/24/19 16:30	05/24/19 16:30		CAD	MANUAL	10	B047167
3	EPA-350.1	06/03/19 15:00	06/04/19 16:41		JMH	SC-1	1	B047866

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**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916314-04	<b>Client Sample Name:</b> Robert Gioletti & Sons Dairy, ROB-MW4s, 5/21/2019 11:57:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	50	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/21/19 23:30	05/22/19 05:06	TMS	IC8	5	B046983
2	SM-2540C	05/24/19 16:30	05/24/19 16:30	CAD	MANUAL	10	B047167
3	EPA-350.1	06/03/19 15:30	06/04/19 16:43	JMH	SC-1	1	B047867

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**Reported:** 06/12/2019 11:31  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916314-05	<b>Client Sample Name:</b> Robert Gioletti & Sons Dairy, ROB-MW5s, 5/21/2019 12:23:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	64	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1900	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/21/19 23:30	05/22/19 05:26		TMS	IC8	5	B046983
2	SM-2540C	05/24/19 16:30	05/24/19 16:30		CAD	MANUAL	10	B047167
3	EPA-350.1	06/03/19 15:30	06/04/19 16:47		JMH	SC-1	1	B047867

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**Reported:** 06/12/2019 11:31  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916314-06	<b>Client Sample Name:</b> Robert Gioletti & Sons Dairy, ROB-MW6s, 5/21/2019 9:30:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	8.1	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2700	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	73	mg/L	10	3.4	EPA-350.1	ND	A07	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/21/19 23:30	05/22/19 07:09	TMS	IC8	5	B046983
2	SM-2540C	05/24/19 16:30	05/24/19 16:30	CAD	MANUAL	10	B047167
3	EPA-350.1	06/03/19 15:30	06/04/19 16:48	JMH	SC-1	50	B047867

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**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916314-07	<b>Client Sample Name:</b> Robert Gioletti & Sons Dairy, ROB-MW7s, 5/21/2019 9:53:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	79	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.71	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/21/19 23:30	05/22/19 07:29		TMS	IC8	10	B046983
2	SM-2540C	05/24/19 16:30	05/24/19 16:30		CAD	MANUAL	5	B047167
3	EPA-350.1	06/03/19 15:30	06/04/19 16:50		JMH	SC-1	1	B047867

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**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916314-08	<b>Client Sample Name:</b> Robert Gioletti & Sons Dairy, ROB-MW8s, 5/21/2019 10:20:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	80	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/21/19 23:30	05/22/19 07:50		TMS	IC8	5	B046983
2	SM-2540C	05/24/19 16:30	05/24/19 16:30		CAD	MANUAL	10	B047167
3	EPA-350.1	06/03/19 15:30	06/04/19 16:52		JMH	SC-1	1	B047867

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**Reported:** 06/12/2019 11:31  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916314-09	<b>Client Sample Name:</b> Robert Gioletti & Sons Dairy, Field Duplicate #2, 5/21/2019 12:00:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	81	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/21/19 23:30	05/22/19 08:10	TMS	IC8	5	B046983
2	SM-2540C	05/24/19 16:30	05/24/19 16:30	CAD	MANUAL	10	B047167
3	EPA-350.1	06/03/19 15:30	06/04/19 16:52	JMH	SC-1	1	B047867

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**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046983</b>						
Nitrate as N	B046983-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047167</b>						
Total Dissolved Solids @ 180 C	B047167-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047866</b>						
Ammonia as N	B047866-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B047867</b>						
Ammonia as N	B047867-BLK1	ND	mg/L	0.20	0.067	

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**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046983</b>										
Nitrate as N	B046983-BS1	LCS	4.5840	5.0000	mg/L	91.7		90 - 110		
<b>QC Batch ID: B047167</b>										
Total Dissolved Solids @ 180 C	B047167-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
<b>QC Batch ID: B047866</b>										
Ammonia as N	B047866-BS1	LCS	0.94610	1.0000	mg/L	94.6		90 - 110		
<b>QC Batch ID: B047867</b>										
Ammonia as N	B047867-BS1	LCS	0.92570	1.0000	mg/L	92.6		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:31  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046983</b>		Used client sample: Y - Description: ROB-MW1s, 05/21/2019 10:47								
Nitrate as N	DUP	1916314-01	93.225	93.650		mg/L	0.5		10	
	MS	1916314-01	93.225	115.90	25.253	mg/L		89.8		80 - 120
	MSD	1916314-01	93.225	115.74	25.253	mg/L	0.1	89.1	10	80 - 120
<b>QC Batch ID: B047167</b>		Used client sample: Y - Description: ROB-MW1s, 05/21/2019 10:47								
Total Dissolved Solids @ 180 C	DUP	1916314-01	2010.0	2020.0		mg/L	0.5		10	
<b>QC Batch ID: B047866</b>		Used client sample: N								
Ammonia as N	DUP	1916148-01	ND	ND		mg/L			10	
	MS	1916148-01	ND	1.1391	1.1111	mg/L		103		90 - 110
	MSD	1916148-01	ND	1.1429	1.1111	mg/L	0.3	103	10	90 - 110
<b>QC Batch ID: B047867</b>		Used client sample: Y - Description: ROB-MW4s, 05/21/2019 11:57								
Ammonia as N	DUP	1916314-04	ND	ND		mg/L			10	
	MS	1916314-04	ND	1.0861	1.1111	mg/L		97.8		90 - 110
	MSD	1916314-04	ND	1.1258	1.1111	mg/L	3.6	101	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:31  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Robert Gioletti & Sons Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 06/13/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Woods Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1917055

Invoice ID: B343337

Enclosed are the results of analyses for samples received by the laboratory on 5/29/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1917055

Samples were filtered through a 0.45 micron filter prior to analysis.



**Chain of Custody**

**Analysis Requested**

**BC Laboratories, Inc.**

19-17055

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

From Filtered Sample:  
Ammonia-N, NO3-N,  
Total Dissolved Solids

Name: Luhdorff and Scalmanini		Reduced Constituent Suite		Project: Dairy Representative Monitoring Program		Site: Woods Dairy		Samplers Name: Deffen/Ashey/Purdom		Global ID - WDR100039198	
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1 Fe Unpreserved						
-1	WOO-MW1	5/29/19	9:30	GW	x						
-2	WOO-MW2		10:00		x						
-3	WOO-MW3		10:30		x						
4	<del>WOO-MW4</del>										
5											
6											
7											
8											
9											
10											
11											
12											

**SHORT HOLDING TIME**

Cr<sup>6</sup> NO<sub>2</sub> NO<sub>3</sub> OP SS

DO Cl<sub>2</sub> BOD MBAS COT

**CHKBY DISTRIBUTION**

GSX NA I I I

SUB OUT

**Comments:**

1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.

2) Lab reports shall identify sampled wells exactly as shown on this CoC.

3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lscce.com, rhyson@lscce.com, pathalwal@lscce.com, jlovelis@lscce.com

4) Send invoices to: Jeannette Lovelis (jlovelis@lscce.com).

Relinquished by: (Signature) *Johny Purdom* 5-29-19 / 16:50

Relinquished by: (Signature)

Relinquished by: (Signature)

Received By: *GSX* 5/29/19 16:50

Received by: *GSX* 5/29/19 22:50

Received By: *GSX* 5/29/19 22:50

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BC LABORATORIES INC.		COOLER RECEIPT FORM		Page <u>1</u> Of <u>1</u>
Submission #: <u>19-17055</u>				
SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> <u>W / S</u>
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments: _____				
Custody Seals Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments: _____				
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.98</u> Container: <u>PE</u> Thermometer ID: <u>208</u>		Date/Time: <u>5/29/200</u>
		Temperature: (A) <u>1.4</u> °C / (C) <u>1.3</u> °C		Analyst Init <u>EMC</u>

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 501609/3090										
QT EPA 515.18150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: EMC Date/Time: 5-29-19 2215 Rev 21 05/23/2016

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1917055-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/29/2019 22:00
	<b>Project Number:</b>	Woods Dairy	<b>Sampling Date:</b>	05/29/2019 09:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	WOO-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley Light of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1917055-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/29/2019 22:00
	<b>Project Number:</b>	Woods Dairy	<b>Sampling Date:</b>	05/29/2019 10:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	WOO-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley Light of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1917055-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/29/2019 22:00
	<b>Project Number:</b>	Woods Dairy	<b>Sampling Date:</b>	05/29/2019 10:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	WOO-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley Light of DTO	<b>Sample Type:</b>	Water
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1917055-01	<b>Client Sample Name:</b> Woods Dairy, WOO-MW1, 5/29/2019 9:30:00AM, Del-Tech/Ashley Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	42	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1000	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/29/19 18:00	05/30/19 13:29		SAV	IC8	5	B047535
2	SM-2540C	06/04/19 11:00	06/04/19 11:00		CAD	MANUAL	5	B047887
3	EPA-350.1	06/10/19 10:00	06/11/19 12:58		JMH	SC-1	1	B048377

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1917055-02	<b>Client Sample Name:</b> Woods Dairy, WOO-MW2, 5/29/2019 10:00:00AM, Del-Tech/Ashley Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	18	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	630	mg/L	33	17	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/29/19 18:00	05/30/19	11:06	SAV	IC8	2	B047535
2	SM-2540C	06/04/19 11:00	06/04/19	11:00	CAD	MANUAL	3.333	B047887
3	EPA-350.1	06/10/19 10:00	06/11/19	12:59	JMH	SC-1	1	B048377

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1917055-03	<b>Client Sample Name:</b> Woods Dairy, WOO-MW3, 5/29/2019 10:30:00AM, Del-Tech/Ashley Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	38	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	980	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.070	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/29/19 18:00	05/30/19 11:26		SAV	IC8	2	B047535
2	SM-2540C	06/04/19 11:00	06/04/19 11:00		CAD	MANUAL	5	B047887
3	EPA-350.1	06/10/19 10:00	06/11/19 13:01		JMH	SC-1	1	B048377

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047535</b>						
Nitrate as N	B047535-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047887</b>						
Total Dissolved Solids @ 180 C	B047887-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048377</b>						
Ammonia as N	B048377-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:28  
Project: Dairy Representative Monitoring Program  
Project Number: Woods Dairy  
Project Manager: Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047535</b>										
Nitrate as N	B047535-BS1	LCS	5.4040	5.0000	mg/L	108		90 - 110		
<b>QC Batch ID: B047887</b>										
Total Dissolved Solids @ 180 C	B047887-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B048377</b>										
Ammonia as N	B048377-BS1	LCS	0.99700	1.0000	mg/L	99.7		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B047535</b>		Used client sample: N								
Nitrate as N	DUP	1917054-01	0.67100	0.67900		mg/L	1.2		10	
	MS	1917054-01	0.67100	6.2081	5.0505	mg/L		110		80 - 120
	MSD	1917054-01	0.67100	6.2091	5.0505	mg/L	0.0	110	10	80 - 120
<b>QC Batch ID: B047887</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1917189-01	24800	24500		mg/L	1.2		10	
<b>QC Batch ID: B048377</b>		Used client sample: N								
Ammonia as N	DUP	I918126-01RE1	0.20920	0.18470		mg/L	12.4		10	J,A02
	MS	I918126-01RE1	0.20920	1.3136	1.1111	mg/L		99.4		90 - 110
	MSD	I918126-01RE1	0.20920	1.2899	1.1111	mg/L	1.8	97.3	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Woods Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 06/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Antone L. Gomes & Sons Dairy  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1916625  
Invoice ID: B343289

Enclosed are the results of analyses for samples received by the laboratory on 5/23/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916625

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b> 4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		<b>Chain of Custody</b>	
<b>Report to:</b> Reduced Constituent Suite			
Name: Luhdorff and Scalmani Address: 500 First Street City: Woodland State: 95685 CA Attn: Till Angermann			
Project: Dairy Representative Monitoring Program Site: Antone L. Gomes & Sons Dairy Samplers Name: <i>Del Teek / Stacy Light</i> Global ID - GADAIRY00011			
From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids			
Lab # -1 -2 -3 -4 -5 -6 -7 8 9 10 11 12	Strike out non-sampled wells ANT-MW1d ANT-MW2s, ANT-MW3s, ANT-MW4s, ANT-MW5s, ANT-MW6s, Field Duplicate # 5	Date Sampled 5-23-19 10:02 10:51 10:32 9:15 11:15 11A	Matrix GW / / / / / /
Time Sampled 5-23-19 9:58 10:02 10:51 10:32 9:15 11:15 11A		Qi Pe Unpreserved x x x x x x x x x x	SHORT HOLDING TIME Cr <sup>6</sup> NO <sub>2</sub> (NO <sub>3</sub> ) OP SS DO CL ROD MBAS COT CHK BY [Signature] DISTRIBUTION SUB OUT
<b>Comments:</b> 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luhdorff and Scalmani Consulting Engineers via email: llavagnino@lscce.com, rbryson@lscce.com, pdhalliwal@lscce.com, jlovelis@lscce.com 4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).			
Relinquished by: (Signature) <i>[Signature]</i> 5-23-19		Received By: Date & Time <i>[Signature]</i> 5/23/19 16:35	
Relinquished by: (Signature) <i>[Signature]</i>		Received by: Date & Time <i>[Signature]</i> 5/23/19 22:00	
Relinquished by: (Signature)		Received By: Date & Time	
(A)= Analysis (C)= Container (P)= Preservative			

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-16625

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Intact? Yes  No  Intact? Yes  No  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO

Emissivity: 0.98 Container: PE Thermometer ID: 108 Date/Time: 5/23/2009

Temperature: (A) 1.6 °C / (C) 1.5 °C Analyst Init: EMR

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A			
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/808										
QT EPA 515.1/815										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
Box / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCE VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: EMR Date/Time: 5-23-09 2219 Rev 21 05/23/2016

A = Actual / C = Corrected

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916625-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Antone L. Gomes & Sons	<b>Sampling Date:</b>	05/23/2019 09:38
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANT-MW1d	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916625-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Antone L. Gomes & Sons	<b>Sampling Date:</b>	05/23/2019 10:02
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANT-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916625-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Antone L. Gomes & Sons	<b>Sampling Date:</b>	05/23/2019 10:51
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANT-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916625-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Antone L. Gomes & Sons	<b>Sampling Date:</b>	05/23/2019 10:32
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANT-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916625-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Antone L. Gomes & Sons	<b>Sampling Date:</b>	05/23/2019 09:15
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANT-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916625-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Antone L. Gomes & Sons	<b>Sampling Date:</b>	05/23/2019 11:15
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	ANT-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916625-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Antone L. Gomes & Sons	<b>Sampling Date:</b>	05/23/2019 00:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate #5	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916625-01	<b>Client Sample Name:</b> Antone L. Gomes & Sons, ANT-MW1d, 5/23/2019 9:38:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	55	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.077	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 14:21	SAV	IC5	5	B047244
2	SM-2540C	05/30/19 14:00	05/30/19 14:00	CAD	MANUAL	10	B047525
3	EPA-350.1	06/07/19 15:00	06/10/19 15:50	JMH	SC-1	1	B048257

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916625-02	<b>Client Sample Name:</b> Antone L. Gomes & Sons, ANT-MW2s, 5/23/2019 10:02:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	68	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 14:39		SAV	IC5	5	B047244
2	SM-2540C	05/30/19 14:00	05/30/19 14:00		CAD	MANUAL	10	B047525
3	EPA-350.1	06/07/19 15:00	06/10/19 15:50		JMH	SC-1	1	B048257

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916625-03	<b>Client Sample Name:</b> Antone L. Gomes & Sons, ANT-MW3s, 5/23/2019 10:51:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	68	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.074	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 14:57	KEB	IC5	5	B047244
2	SM-2540C	05/30/19 14:00	05/30/19 14:00	CAD	MANUAL	10	B047525
3	EPA-350.1	06/07/19 15:00	06/10/19 15:53	JMH	SC-1	1	B048258

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916625-04	<b>Client Sample Name:</b> Antone L. Gomes & Sons, ANT-MW4s, 5/23/2019 10:32:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	23	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 15:15	KEB	IC5	2	B047244
2	SM-2540C	05/30/19 14:00	05/30/19 14:00	CAD	MANUAL	10	B047525
3	EPA-350.1	06/07/19 15:00	06/10/19 15:59	JMH	SC-1	1	B048258

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Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916625-05	<b>Client Sample Name:</b> Antone L. Gomes & Sons, ANT-MW5s, 5/23/2019 9:15:00AM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	20	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	940	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.18	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 15:32		KEB	IC5	5	B047244
2	SM-2540C	05/30/19 14:00	05/30/19 14:00		CAD	MANUAL	5	B047525
3	EPA-350.1	06/07/19 15:00	06/10/19 15:59		JMH	SC-1	1	B048258

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916625-06	<b>Client Sample Name:</b> Antone L. Gomes & Sons, ANT-MW6s, 5/23/2019 11:15:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	37	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.067	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 15:50	KEB	IC5	2	B047244
2	SM-2540C	05/30/19 14:00	05/30/19 14:00	CAD	MANUAL	5	B047526
3	EPA-350.1	06/07/19 15:00	06/10/19 16:00	JMH	SC-1	1	B048258

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916625-07	<b>Client Sample Name:</b> Antone L. Gomes & Sons, Field Duplicate #5, 5/23/2019 12:00:00AM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	37	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.073	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 16:08	KEB	IC5	2	B047244
2	SM-2540C	05/30/19 14:00	05/30/19 14:00	CAD	MANUAL	5	B047526
3	EPA-350.1	06/07/19 15:00	06/10/19 16:01	JMH	SC-1	1	B048258

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Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047244</b>						
Nitrate as N	B047244-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047525</b>						
Total Dissolved Solids @ 180 C	B047525-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047526</b>						
Total Dissolved Solids @ 180 C	B047526-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048257</b>						
Ammonia as N	B048257-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B048258</b>						
Ammonia as N	B048258-BLK1	ND	mg/L	0.20	0.067	

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Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047244</b>										
Nitrate as N	B047244-BS1	LCS	4.8990	5.0000	mg/L	98.0		90 - 110		
<b>QC Batch ID: B047525</b>										
Total Dissolved Solids @ 180 C	B047525-BS1	LCS	600.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B047526</b>										
Total Dissolved Solids @ 180 C	B047526-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B048257</b>										
Ammonia as N	B048257-BS1	LCS	0.95090	1.0000	mg/L	95.1		90 - 110		
<b>QC Batch ID: B048258</b>										
Ammonia as N	B048258-BS1	LCS	1.0087	1.0000	mg/L	101		90 - 110		

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Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B047244</b>		Used client sample: Y - Description: ANT-MW1d, 05/23/2019 09:38								
Nitrate as N	DUP	1916625-01	55.025	55.065		mg/L	0.1		10	
	MS	1916625-01	55.025	81.960	25.253	mg/L		107		80 - 120
	MSD	1916625-01	55.025	79.677	25.253	mg/L	2.8	97.6	10	80 - 120
<b>QC Batch ID: B047525</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916611-02	2230.0	2200.0		mg/L	1.4		10	
<b>QC Batch ID: B047526</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916624-01	1610.0	1640.0		mg/L	1.8		10	
<b>QC Batch ID: B048257</b>		Used client sample: N								
Ammonia as N	DUP	1916624-01	0.45390	0.39850		mg/L	13.0		10	A02
	MS	1916624-01	0.45390	1.5028	1.1111	mg/L		94.4		90 - 110
	MSD	1916624-01	0.45390	1.4992	1.1111	mg/L	0.2	94.1	10	90 - 110
<b>QC Batch ID: B048258</b>		Used client sample: Y - Description: ANT-MW3s, 05/23/2019 10:51								
Ammonia as N	DUP	1916625-03	0.074200	ND		mg/L			10	
	MS	1916625-03	0.074200	1.2077	1.1111	mg/L		102		90 - 110
	MSD	1916625-03	0.074200	1.1543	1.1111	mg/L	4.5	97.2	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 16:06  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Antone L. Gomes & Sons Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 06/10/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Correia Family Dairy  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1916472  
Invoice ID: B342977

Enclosed are the results of analyses for samples received by the laboratory on 5/22/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916472

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to:			Analysis Requested		
Name: Luhdorff and Scalmanini		Reduced Constituent Suite			
Address: 500 First Street		Project: Dairy Representative Monitoring Program			
City: Woodland		Site: Correlia Family Dairy			
State: 95695		Samplers Name: DeFitech Ashley Putnam			
Attn: Till Angermann		Global ID - GADAIRY00012			
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Q1/Pc Unpreserved
- 1	<del>COR-MW1s, [scribble]</del>	5/22/19	9:42	ew	x
- 2	<del>COR-MW2s, [scribble]</del>		10:06		x
- 3	<del>COR-MW3s, [scribble]</del>		10:23		x
- 4	<del>COR-MW4s, [scribble]</del>		9:16		x
- 5	<del>COR-MW5s, [scribble]</del>		8:54		x
- 6	Field Duplicate				x
7					
8					
9					
10					
11					
From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids					
SHORT HOLDING TIME Cr <sup>6</sup> NO <sub>2</sub> (NO) OP SS DO Cl <sub>2</sub> FOD MBAS COT					
CHK BY DISTRIBUTION [Signature]					
SUB OUT [ ]					
Relinquished by: (Signature)		Ashley Putnam 5/22/19 / 1640		Date & Time 5/22/19 16:40	
Relinquished by: (Signature)		[Signature]		Date & Time 5/22/19 22:15	
Relinquished by: (Signature)		[Signature]		Date & Time	
Comments: 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lscce.com, rbryson@lscce.com, pohlwal@lscce.com, jlovelis@lscce.com 4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).					
(A)= Analysis (C)= Container (P)= Preservative					

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-16472

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/22/2015  
 Temperature: (A) 1.4 °C / (C) 1.3 °C Analyst Init: GMK

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A				
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8050										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 567										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLERVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: GMK Date/Time: 5/22/15 11:00 Rev 21 03/23/2010  
 A = Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916472-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Correia Family Dairy	<b>Sampling Date:</b>	05/22/2019 09:42
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COR-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916472-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Correia Family Dairy	<b>Sampling Date:</b>	05/22/2019 10:06
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COR-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916472-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Correia Family Dairy	<b>Sampling Date:</b>	05/22/2019 10:23
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COR-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916472-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Correia Family Dairy	<b>Sampling Date:</b>	05/22/2019 09:16
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COR-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916472-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Correia Family Dairy	<b>Sampling Date:</b>	05/22/2019 08:54
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	COR-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916472-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Correia Family Dairy	<b>Sampling Date:</b>	05/22/2019 00:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate 8	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916472-01	<b>Client Sample Name:</b> Correia Family Dairy, COR-MW1s, 5/22/2019 9:42:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	58	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	3000	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.11	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 04:00	05/23/19	04:42	SAV	IC5	5	B047084
2	SM-2540C	05/28/19 15:00	05/28/19	15:00	CAD	MANUAL	20	B047358
3	EPA-350.1	06/06/19 10:30	06/07/19	09:23	JMH	SC-1	1	B048151

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500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916472-02	<b>Client Sample Name:</b> Correia Family Dairy, COR-MW2s, 5/22/2019 10:06:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	8.6	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 04:00	05/23/19 05:54		SAV	IC5	2	B047084
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	5	B047358
3	EPA-350.1	06/06/19 10:30	06/07/19 09:27		JMH	SC-1	1	B048151

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Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916472-03	<b>Client Sample Name:</b> Correia Family Dairy, COR-MW3s, 5/22/2019 10:23:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	9.8	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 04:00	05/23/19 06:11		SAV	IC5	2	B047084
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	10	B047358
3	EPA-350.1	06/06/19 10:30	06/07/19 09:29		JMH	SC-1	1	B048151

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500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916472-04	<b>Client Sample Name:</b> Correia Family Dairy, COR-MW4s, 5/22/2019 9:16:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	8.7	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 04:00	05/23/19 07:59		SAV	IC5	2	B047084
2	SM-2540C	05/28/19 15:00	05/28/19 15:00		CAD	MANUAL	10	B047358
3	EPA-350.1	06/06/19 10:30	06/07/19 09:31		JMH	SC-1	1	B048151

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Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916472-05	<b>Client Sample Name:</b> Correia Family Dairy, COR-MW5s, 5/22/2019 8:54:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	2.5	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2900	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.62	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/23/19 04:00	05/23/19 08:17	SAV	IC5	5	B047084
2	SM-2540C	05/28/19 15:00	05/28/19 15:00	CAD	MANUAL	20	B047358
3	EPA-350.1	06/06/19 10:30	06/07/19 09:32	JMH	SC-1	1	B048151

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Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916472-06	<b>Client Sample Name:</b> Correia Family Dairy, Field Duplicate 8, 5/22/2019 12:00:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	58	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	3000	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.097	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/23/19 04:00	05/23/19 08:35	SAV	IC5	5	B047084
2	SM-2540C	05/28/19 15:00	05/28/19 15:00	CAD	MANUAL	20	B047358
3	EPA-350.1	06/06/19 10:30	06/07/19 09:32	JMH	SC-1	1	B048151

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047084</b>						
Nitrate as N	B047084-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047358</b>						
Total Dissolved Solids @ 180 C	B047358-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048151</b>						
Ammonia as N	B048151-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047084</b>										
Nitrate as N	B047084-BS1	LCS	5.1130	5.0000	mg/L	102		90 - 110		
<b>QC Batch ID: B047358</b>										
Total Dissolved Solids @ 180 C	B047358-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B048151</b>										
Ammonia as N	B048151-BS1	LCS	0.97660	1.0000	mg/L	97.7		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
<b>QC Batch ID: B047084</b>		Used client sample: Y - Description: COR-MW1s, 05/22/2019 09:42									
Nitrate as N	DUP	1916472-01	58.200	58.860		mg/L	1.1		10		
	MS	1916472-01	58.200	85.758	25.253	mg/L		109		80 - 120	
	MSD	1916472-01	58.200	85.551	25.253	mg/L	0.2	108	10	80 - 120	
<b>QC Batch ID: B047358</b>		Used client sample: Y - Description: COR-MW1s, 05/22/2019 09:42									
Total Dissolved Solids @ 180 C	DUP	1916472-01	3020.0	2960.0		mg/L	2.0		10		
<b>QC Batch ID: B048151</b>		Used client sample: Y - Description: COR-MW1s, 05/22/2019 09:42									
Ammonia as N	DUP	1916472-01	0.10620	0.11200		mg/L	5.3		10		J
	MS	1916472-01	0.10620	1.1338	1.0000	mg/L		103		90 - 110	
	MSD	1916472-01	0.10620	1.1346	1.0000	mg/L	0.1	103	10	90 - 110	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 15:54  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Correia Family Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 06/13/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Frank J. Gomes Dairy #2  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1916628  
Invoice ID: B343334

Enclosed are the results of analyses for samples received by the laboratory on 5/23/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916628

Samples were filtered through a 0.45 micron filter prior to analysis.



**BC Laboratories, Inc.**

19-16628

4100 Atlas Ct.  
Bakersfield, CA 93308  
(661) 327-4911

**Chain of Custody**

**Analysis Requested**

---

**Report to:** Reduced Constituent Suite

Name: Luhdorff and Scalmanini  
 Address: 500 First Street  
 City: Woodland  
 State: 95695  
 CA  
 Attn: Till Angermann

Project: Dairy Representative Monitoring Program  
 Site: Frank J. Gomes Dairy #2  
 Samplers Name: Del-Tech Ashley Putnam  
 Global ID - GADAIRY00013

From Filtered Sample:  
 Ammonia-N, NO3-N,  
 Total Dissolved Solids

Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ct Pe Unpreserved
- 1	<del>FG2-MW1s, FG2-MW2s, FG2-MW3s, FG2-MW4s, FG2-MW5s</del>	5-23-19	10:32	GW	x
- 2	<del>FG2-MW1s, FG2-MW2s, FG2-MW3s, FG2-MW4s, FG2-MW5s</del>		9:48		x
- 3	<del>FG2-MW1s, FG2-MW2s, FG2-MW3s, FG2-MW4s, FG2-MW5s</del>		10:11		x
- 4	<del>FG2-MW1s, FG2-MW2s, FG2-MW3s, FG2-MW4s, FG2-MW5s</del>		11:00		x
- 5	<del>FG2-MW1s, FG2-MW2s, FG2-MW3s, FG2-MW4s, FG2-MW5s</del>		9:24		x
6					
7					
8					
9					
10					
11					
12					

**SHORT TOLLING TIME**

Cr<sup>6</sup> NO<sub>2</sub> NO<sub>3</sub> OP SS  
 DO Cl<sub>2</sub> ROD MEAS COT

**CHK BY** DISTRIBUTION  
 651 NW SUB OUT

**Relinquished by: (Signature)** Ashley Putnam 5-23-19 / 18:10  
**Relinquished by: (Signature)** [Signature]  
**Relinquished by: (Signature)** [Signature]

**Received By:** [Signature] 5/23/19 18:10  
**Received by:** [Signature] 5/23/19 22:00  
**Received by:** [Signature]

**Comments:**  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: rlavagnino@lscce.com, roryson@lscce.com, pdhallwei@lscce.com, jlovelis@lscce.com  
 4) Send invoices to Jeanette Lovell (jlovelis@lscce.com).

(A)= Analysis (C)= Container (P)= Preservative

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 19-16628

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.98 Container: PE Thermometer ID: 108 Date/Time: 5/23/2008  
 Temperature: (A) 0.9 °C / (C) 0.8 °C Analyst Init: EML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr*										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8090										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: EML Date/Time: 5/23 EML Rev 21 05/23/2016

A = Actual / C = Corrected

IS (MYPDec)WordPerfect/LAB\_002FORMSISAWRECrev 201



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #2  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916628-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Frank J. Gomes	<b>Sampling Date:</b>	05/23/2019 10:32
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG2-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time
1916628-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Frank J. Gomes	<b>Sampling Date:</b>	05/23/2019 09:48
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG2-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time
1916628-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Frank J. Gomes	<b>Sampling Date:</b>	05/23/2019 10:11
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG2-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time
1916628-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Frank J. Gomes	<b>Sampling Date:</b>	05/23/2019 11:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG2-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time
1916628-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Frank J. Gomes	<b>Sampling Date:</b>	05/23/2019 09:24
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	FG2-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			<b>Metal Analysis:</b>	2-Lab Filtered and Acidified past 15 minute holding time

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916628-01	<b>Client Sample Name:</b> Frank J. Gomes, FG2-MW1s, 5/23/2019 10:32:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	ND	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
<b>Total Dissolved Solids @ 180 C</b>	<b>3300</b>	<b>mg/L</b>	<b>100</b>	<b>50</b>	<b>SM-2540C</b>	ND		2
Ammonia as N	0.11	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 18:13	KEB	IC8	5	B047239
2	SM-2540C	05/30/19 15:00	05/30/19 15:00	CAD	MANUAL	10	B047528
3	EPA-350.1	06/10/19 15:00	06/11/19 12:36	JMH	SC-1	1	B048415

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916628-02	<b>Client Sample Name:</b> Frank J. Gomes, FG2-MW2s, 5/23/2019 9:48:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	12	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2200	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 19:35		KEB	IC8	2	B047239
2	SM-2540C	05/30/19 15:00	05/30/19 15:00		CAD	MANUAL	10	B047528
3	EPA-350.1	06/10/19 15:00	06/11/19 12:38		JMH	SC-1	1	B048415

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916628-03	<b>Client Sample Name:</b> Frank J. Gomes, FG2-MW3s, 5/23/2019 10:11:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	6.3	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	4100	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.075	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 19:55		KEB	IC8	5	B047239
2	SM-2540C	05/30/19 15:00	05/30/19 15:00		CAD	MANUAL	20	B047528
3	EPA-350.1	06/10/19 15:00	06/11/19 12:40		JMH	SC-1	1	B048415

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916628-04	<b>Client Sample Name:</b> Frank J. Gomes, FG2-MW4s, 5/23/2019 11:00:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	19	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2600	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.090	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 20:16	KEB	IC8	5	B047239
2	SM-2540C	05/30/19 15:00	05/30/19 15:00	CAD	MANUAL	10	B047528
3	EPA-350.1	06/10/19 15:00	06/11/19 12:41	JMH	SC-1	1	B048415

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916628-05	<b>Client Sample Name:</b> Frank J. Gomes, FG2-MW5s, 5/23/2019 9:24:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	7.9	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.092	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/24/19 13:00	05/24/19 20:36		KEB	IC8	2	B047239
2	SM-2540C	05/30/19 15:00	05/30/19 15:00		CAD	MANUAL	10	B047528
3	EPA-350.1	06/10/19 15:00	06/11/19 12:42		JMH	SC-1	1	B048415

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #2  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047239</b>						
Nitrate as N	B047239-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047528</b>						
Total Dissolved Solids @ 180 C	B047528-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048415</b>						
Ammonia as N	B048415-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047239</b>										
Nitrate as N	B047239-BS1	LCS	5.2430	5.0000	mg/L	105		90 - 110		
<b>QC Batch ID: B047528</b>										
Total Dissolved Solids @ 180 C	B047528-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B048415</b>										
Ammonia as N	B048415-BS1	LCS	0.99310	1.0000	mg/L	99.3		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #2  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
								Percent Recovery	RPD	Percent Recovery
<b>QC Batch ID: B047239</b>		Used client sample: Y - Description: FG2-MW1s, 05/23/2019 10:32								
Nitrate as N	DUP	1916628-01	ND	ND		mg/L			10	
	MS	1916628-01	ND	27.071	25.253	mg/L		107		80 - 120
	MSD	1916628-01	ND	27.035	25.253	mg/L	0.1	107	10	80 - 120
<b>QC Batch ID: B047528</b>		Used client sample: Y - Description: FG2-MW1s, 05/23/2019 10:32								
Total Dissolved Solids @ 180 C	DUP	1916628-01	3280.0	3230.0		mg/L	1.5		10	
<b>QC Batch ID: B048415</b>		Used client sample: N								
Ammonia as N	DUP	1916941-03	0.11540	0.11700		mg/L	1.4		10	J
	MS	1916941-03	0.11540	0.99090	1.0000	mg/L		87.6		90 - 110 Q03
	MSD	1916941-03	0.11540	1.0065	1.0000	mg/L	1.6	89.1	10	90 - 110 Q03

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/13/2019 9:27  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Frank J. Gomes Dairy #2  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 06/06/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Godinho Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916316

Invoice ID: B342558

Enclosed are the results of analyses for samples received by the laboratory on 5/21/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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### Quality Control Reports

<b>Water Analysis (General Chemistry)</b>	
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## Case Narratives

### Case Narrative for Work Order 1916316

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		Chain of Custody					
19-16316		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911					
<b>Report to:</b>							
Reduced Constituent Suite							
Project: Dairy Representative Monitoring Program							
Site: Godinho Dairy							
Samplers Name: DeFlech Ashley Putnam							
Global ID - GADAIR700014							
From Filtered Sample:							
Ammonia-N, NO3-N, Total Dissolved Solids							
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Qt	Pe	Unpreserved
-1	<del>GOD-MW1s, GOD-MW2s, GOD-MW3s, GOD-MW4s, GOD-MW5s, GOD-MW6s, GOD-MW7s</del>	5/21/19	8:50	GW	x		x
-2	<del>GOD-MW1s, GOD-MW2s, GOD-MW3s, GOD-MW4s, GOD-MW5s, GOD-MW6s, GOD-MW7s</del>		9:53		x		x
-3	<del>GOD-MW1s, GOD-MW2s, GOD-MW3s, GOD-MW4s, GOD-MW5s, GOD-MW6s, GOD-MW7s</del>		9:29		x		x
-4	<del>GOD-MW1s, GOD-MW2s, GOD-MW3s, GOD-MW4s, GOD-MW5s, GOD-MW6s, GOD-MW7s</del>		9:10		x		x
-5	<del>GOD-MW1s, GOD-MW2s, GOD-MW3s, GOD-MW4s, GOD-MW5s, GOD-MW6s, GOD-MW7s</del>		11:10		x		x
-6	<del>GOD-MW1s, GOD-MW2s, GOD-MW3s, GOD-MW4s, GOD-MW5s, GOD-MW6s, GOD-MW7s</del>		10:20		x		x
-7	<del>GOD-MW1s, GOD-MW2s, GOD-MW3s, GOD-MW4s, GOD-MW5s, GOD-MW6s, GOD-MW7s</del>		10:44		x		x
-8	Field Duplicate						x
9							
10							
11							
12							
<b>Comments:</b>				1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Lufdorff and Scalmanini Consulting Engineers via email: llavegnino@lscce.com, rorysom@lscce.com, p.dhalliwal@lscce.com, jlovelis@lscce.com 4) Send invoices to Jeanette Lovelis (jlovelis@lscce.com).			
<b>Analysis Requested</b>				SHORT HOLDING TIME Cr <sup>6+</sup> NO <sub>2</sub> (NO) OP SS DO Cl <sub>2</sub> BOD MBAS COT CHK BY DISTRIBUTION (65) NA I I I I SUB OUT <input type="checkbox"/>			
<b>Relinquished by: (Signature)</b>				<b>Received By: (Signature)</b>			
Ashley Putnam 5/21/19 17:20				5/21/19 17:20			
<b>Relinquished by: (Signature)</b>				<b>Received by: (Signature)</b>			
Ashley Putnam 5/21/19 22:00				5/21/19 22:00			
<b>Relinquished by: (Signature)</b>				<b>Received By: (Signature)</b>			

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-16316

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals Ice Chest  Containers  None  Comments:  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time 5/21/2000  
 Temperature: (A) 0.3 °C (C) 0.2 °C Analyst Init: BSP

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/6050										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: AR Date/Time: 5-21-11 2215 Rev 21 05/23/2018  
 A = Actual / C = Corrected (S:\WP\Doc\Invent\Perfec\FAB\_BOC\SI\FORMS\SAMREC\rev 20)

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1916316-01	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b>	Godinho Diary	<b>Sampling Date:</b> 05/21/2019 08:50
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	GOD-MW1s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916316-02	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b>	Godinho Diary	<b>Sampling Date:</b> 05/21/2019 09:53
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	GOD-MW2s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916316-03	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b>	Godinho Diary	<b>Sampling Date:</b> 05/21/2019 09:29
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	GOD-MW3s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916316-04	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b>	Godinho Diary	<b>Sampling Date:</b> 05/21/2019 09:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	GOD-MW4s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916316-05	<b>COC Number:</b>	---	<b>Receive Date:</b> 05/21/2019 22:00
	<b>Project Number:</b>	Godinho Diary	<b>Sampling Date:</b> 05/21/2019 11:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b>	GOD-MW5s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916316-06	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Godinho Dairy	<b>Sampling Date:</b>	05/21/2019 10:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GOD-MW6s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916316-07	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Godinho Dairy	<b>Sampling Date:</b>	05/21/2019 10:44
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	GOD-MW7s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time
1916316-08	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Godinho Dairy	<b>Sampling Date:</b>	05/21/2019 00:00
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Field Duplicate 7	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
				Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916316-01	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW1s, 5/21/2019 8:50:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	9.8	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.070	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/21/19 18:00	05/22/19	01:06	SAV	IC5	2	B046978
2	SM-2540C	05/24/19 17:30	05/24/19	17:30	CAD	MANUAL	10	B047217
3	EPA-350.1	06/04/19 13:00	06/05/19	14:35	JMH2	SC-1	1	B047979

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916316-02	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW2s, 5/21/2019 9:53:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	40	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2300	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.070	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/21/19 18:00	05/22/19 02:17	SAV	IC5	5	B046978
2	SM-2540C	05/24/19 17:30	05/24/19 17:30	CAD	MANUAL	10	B047217
3	EPA-350.1	06/04/19 13:00	06/05/19 14:36	JMH2	SC-1	1	B047979

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916316-03	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW3s, 5/21/2019 9:29:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	31	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.099	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/21/19 18:00	05/22/19 02:35		SAV	IC5	2	B046978
2	SM-2540C	05/24/19 17:30	05/24/19 17:30		CAD	MANUAL	10	B047217
3	EPA-350.1	06/04/19 13:00	06/05/19 14:06		JMH2	SC-1	1	B047978

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916316-04	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW4s, 5/21/2019 9:10:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	18	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2900	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.083	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/21/19 18:00	05/22/19 02:53	SAV	IC5	2	B046978
2	SM-2540C	05/24/19 17:30	05/24/19 17:30	CAD	MANUAL	20	B047217
3	EPA-350.1	06/04/19 13:00	06/05/19 14:10	JMH2	SC-1	1	B047978

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**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916316-05	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW5s, 5/21/2019 11:10:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	14	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.11	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/21/19 18:00	05/22/19 03:11		SAV	IC5	2	B046978
2	SM-2540C	05/24/19 17:30	05/24/19 17:30		CAD	MANUAL	10	B047217
3	EPA-350.1	06/04/19 13:00	06/05/19 14:11		JMH2	SC-1	1	B047978

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916316-06	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW6s, 5/21/2019 10:20:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	47	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.080	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/21/19 18:00	05/22/19 04:41		SAV	IC5	5	B046978
2	SM-2540C	05/24/19 17:30	05/24/19 17:30		CAD	MANUAL	10	B047217
3	EPA-350.1	06/04/19 13:00	06/05/19 14:13		JMH2	SC-1	1	B047978

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916316-07	<b>Client Sample Name:</b> Godinho Dairy, GOD-MW7s, 5/21/2019 10:44:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	0.58	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2300	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.081	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/21/19 18:00	05/22/19 04:59		SAV	IC5	2	B046978
2	SM-2540C	05/24/19 17:30	05/24/19 17:30		CAD	MANUAL	10	B047217
3	EPA-350.1	06/04/19 13:00	06/05/19 14:15		JMH2	SC-1	1	B047978

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916316-08	<b>Client Sample Name:</b> Godinho Dairy, Field Duplicate 7, 5/21/2019 12:00:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	18	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2900	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.073	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/21/19 18:00	05/22/19 05:16	SAV	IC5	2	B046978
2	SM-2540C	05/24/19 17:30	05/24/19 17:30	CAD	MANUAL	20	B047217
3	EPA-350.1	06/04/19 13:00	06/05/19 14:15	JMH2	SC-1	1	B047978

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046978</b>						
Nitrate as N	B046978-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047217</b>						
Total Dissolved Solids @ 180 C	B047217-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047978</b>						
Ammonia as N	B047978-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B047979</b>						
Ammonia as N	B047979-BLK1	ND	mg/L	0.20	0.067	

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**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046978</b>										
Nitrate as N	B046978-BS1	LCS	4.8240	5.0000	mg/L	96.5		90 - 110		
<b>QC Batch ID: B047217</b>										
Total Dissolved Solids @ 180 C	B047217-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B047978</b>										
Ammonia as N	B047978-BS1	LCS	0.98950	1.0000	mg/L	99.0		90 - 110		
<b>QC Batch ID: B047979</b>										
Ammonia as N	B047979-BS1	LCS	0.97610	1.0000	mg/L	97.6		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab
									RPD	Percent Recovery	
<b>QC Batch ID: B046978</b>		Used client sample: Y - Description: GOD-MW1s, 05/21/2019 08:50									
Nitrate as N	DUP	1916316-01	9.8300	9.8000		mg/L	0.3		10		
	MS	1916316-01	9.8300	20.418	10.101	mg/L		105		80 - 120	
	MSD	1916316-01	9.8300	19.533	10.101	mg/L	4.4	96.1	10	80 - 120	
<b>QC Batch ID: B047217</b>		Used client sample: Y - Description: GOD-MW1s, 05/21/2019 08:50									
Total Dissolved Solids @ 180 C	DUP	1916316-01	1700.0	1670.0		mg/L	1.8		10		
<b>QC Batch ID: B047978</b>		Used client sample: Y - Description: GOD-MW3s, 05/21/2019 09:29									
Ammonia as N	DUP	1916316-03	0.099100	0.068200		mg/L	36.9		10		J,A02
	MS	1916316-03	0.099100	1.0892	1.1111	mg/L		89.1		90 - 110	Q03
	MSD	1916316-03	0.099100	1.0883	1.1111	mg/L	0.1	89.0	10	90 - 110	Q03
<b>QC Batch ID: B047979</b>		Used client sample: N									
Ammonia as N	DUP	1916933-01	9.4370	9.3530		mg/L	0.9		10		
	MS	1916933-01	9.4370	12.802	5.0000	mg/L		67.3		90 - 110	Q03
	MSD	1916933-01	9.4370	12.952	5.0000	mg/L	1.2	70.3	10	90 - 110	Q03

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Woodland, CA 95695

**Reported:** 06/06/2019 10:36  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Godinho Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 06/06/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: John Machado Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916317

Invoice ID: B342685

Enclosed are the results of analyses for samples received by the laboratory on 5/21/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916317

Samples were filtered through a 0.45 micron filter prior to analysis.





BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-16317

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/21/2000

Temperature: (A) 0.3 °C / (C) 0.2 °C Analyst Init: GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
Microbiological										
40 ml VOA VIAL - 504										
QT EPA 508/613/6080										
QT EPA 515.1/3150										
QT EPA 525										
QT EPA 535 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLREVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
RNCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: WR

A = Actual / C = Corrected

Date/Time: 5-21-00

2215

Rev 21 05/23/2016

(S:\WPDoc\WordPerfect\LAB\_DOC\FORMS\SAMRECRev 20)

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 22:46  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916317-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	John Machado Dairy	<b>Sampling Date:</b>	05/21/2019 12:20
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAC-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916317-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	John Machado Dairy	<b>Sampling Date:</b>	05/21/2019 11:54
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAC-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916317-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	John Machado Dairy	<b>Sampling Date:</b>	05/21/2019 14:06
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAC-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916317-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	John Machado Dairy	<b>Sampling Date:</b>	05/21/2019 13:28
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAC-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916317-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	John Machado Dairy	<b>Sampling Date:</b>	05/21/2019 12:55
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MAC-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 22:46  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916317-01	<b>Client Sample Name:</b> John Machado Dairy, MAC-MW1s, 5/21/2019 12:20:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	24	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1700	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.10	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 20:00	05/22/19 23:56		SAV	IC5	2	B047083
2	SM-2540C	05/24/19 13:00	05/24/19 13:00		CAD	MANUAL	10	B047154
3	EPA-350.1	06/04/19 13:00	06/05/19 14:17		JMH2	SC-1	1	B047978

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Woodland, CA 95695

**Reported:** 06/06/2019 22:46  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916317-02	<b>Client Sample Name:</b> John Machado Dairy, MAC-MW2s, 5/21/2019 11:54:00AM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	48	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 20:00	05/23/19 07:41		SAV	IC5	5	B047083
2	SM-2540C	05/24/19 13:00	05/24/19 13:00		CAD	MANUAL	10	B047154
3	EPA-350.1	06/04/19 13:00	06/05/19 14:17		JMH2	SC-1	1	B047978

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500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 22:46  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916317-03	<b>Client Sample Name:</b> John Machado Dairy, MAC-MW3s, 5/21/2019 2:06:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	50	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	5300	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.13	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 20:00	05/23/19 01:25	SAV	IC5	5	B047083
2	SM-2540C	05/24/19 13:00	05/24/19 13:00	CAD	MANUAL	20	B047154
3	EPA-350.1	06/04/19 13:00	06/05/19 14:18	JMH2	SC-1	1	B047978

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 22:46  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916317-04	<b>Client Sample Name:</b> John Machado Dairy, MAC-MW4s, 5/21/2019 1:28:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	17	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2700	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.097	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 20:00	05/23/19 01:43		SAV	IC5	2	B047083
2	SM-2540C	05/24/19 13:00	05/24/19 13:00		CAD	MANUAL	10	B047154
3	EPA-350.1	06/04/19 13:00	06/05/19 14:19		JMH2	SC-1	1	B047978

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 22:46  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916317-05	<b>Client Sample Name:</b> John Machado Dairy, MAC-MW5s, 5/21/2019 12:55:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	21	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	3000	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.090	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 20:00	05/23/19 02:01	SAV	IC5	2	B047083
2	SM-2540C	05/24/19 13:00	05/24/19 13:00	CAD	MANUAL	20	B047154
3	EPA-350.1	06/04/19 16:30	06/05/19 14:39	JMH2	SC-1	1	B047981

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 22:46  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047083</b>						
Nitrate as N	B047083-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047154</b>						
Total Dissolved Solids @ 180 C	B047154-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047978</b>						
Ammonia as N	B047978-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B047981</b>						
Ammonia as N	B047981-BLK1	ND	mg/L	0.20	0.067	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 22:46  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047083</b>										
Nitrate as N	B047083-BS1	LCS	4.9740	5.0000	mg/L	99.5		90 - 110		
<b>QC Batch ID: B047154</b>										
Total Dissolved Solids @ 180 C	B047154-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
<b>QC Batch ID: B047978</b>										
Ammonia as N	B047978-BS1	LCS	0.98950	1.0000	mg/L	99.0		90 - 110		
<b>QC Batch ID: B047981</b>										
Ammonia as N	B047981-BS1	LCS	0.94700	1.0000	mg/L	94.7		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 22:46  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B047083</b>		Used client sample: Y - Description: MAC-MW1s, 05/21/2019 12:20								
Nitrate as N	DUP	1916317-01	23.576	23.440		mg/L	0.6		10	
	MS	1916317-01	23.576	33.646	10.101	mg/L		99.7		80 - 120
	MSD	1916317-01	23.576	33.527	10.101	mg/L	0.4	98.5	10	80 - 120
<b>QC Batch ID: B047154</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916148-01	635.00	625.00		mg/L	1.6		10	
<b>QC Batch ID: B047978</b>		Used client sample: N								
Ammonia as N	DUP	1916316-03	0.099100	0.068200		mg/L	36.9		10	J,A02
	MS	1916316-03	0.099100	1.0892	1.1111	mg/L		89.1		90 - 110 Q03
	MSD	1916316-03	0.099100	1.0883	1.1111	mg/L	0.1	89.0	10	90 - 110 Q03
<b>QC Batch ID: B047981</b>		Used client sample: Y - Description: MAC-MW5s, 05/21/2019 12:55								
Ammonia as N	DUP	1916317-05	0.089900	0.092400		mg/L	2.7		10	J
	MS	1916317-05	0.089900	1.1337	1.1111	mg/L		93.9		90 - 110
	MSD	1916317-05	0.089900	1.1651	1.1111	mg/L	2.7	96.8	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/06/2019 22:46  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** John Machado Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.





Date of Report: 06/10/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Jose Nunes Dairy  
BCL Project: Dairy Representative Monitoring Program  
BCL Work Order: 1916318  
Invoice ID: B343014

Enclosed are the results of analyses for samples received by the laboratory on 5/21/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916318

Samples were filtered through a 0.45 micron filter prior to analysis.



BC Laboratories, Inc.		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911		Chain of Custody	
Report to:			Analysis Requested		
Name: Luhdorff and Scalmanini		Reduced Constituent Suite			
Address: 500 First Street		Project: Dairy Representative Monitoring Program			
City: Woodland		Site: Jose Nunes Dairy			
State: CA		Samplers Name: DefTech Ashley Potnam			
Affn: Till Angermann		Global ID - GADAIRY00016			
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl Pe Unpreserved
-1	NUN-MW1s, [redacted]	5/21/19	1530	GW	x
-2	NUN-MW2s, [redacted]	[redacted]	1450	[redacted]	x
-3	NUN-MW3s, [redacted]	[redacted]	1549	[redacted]	x
-4	NUN-MW4s, [redacted]	[redacted]	1610	[redacted]	x
-5	NUN-MW5s, [redacted]	[redacted]	1510	[redacted]	x
6	[redacted]				
7					
8					
9					
10					
11					
12					
From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids					
SHORT HOLDING TIME Cr <sup>6</sup> NO <sub>2</sub> NO <sub>3</sub> OP SS DO Cl <sub>2</sub> SOB MBAS GOT					
CHK BY DISTRIBUTION [initials]					
SUB OUT [ ]					
Requisitioned by: (Signature)		Date & Time		Received By: [Signature] Date & Time	
Requisitioned by: (Signature)		Date & Time		Received By: [Signature] Date & Time	
Requisitioned by: (Signature)		Date & Time		Received By: [Signature] Date & Time	
Comments: 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity. 2) Lab reports shall identify sampled wells exactly as shown on this CoC. 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llvagrinol@isce.com, rbryson@isce.com, pduhalwa@isce.com, jlovelis@isce.com 4) Send invoices to Jeanette Lovelis (jlovelis@isce.com).					
(A)= Analysis (C)= Container (P)= Preservative					

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BC LABORATORIES INC. COOLER RECEIPT FORM Page [ ] Of [ ]

Submission #: 19-16318

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/21/2000

Temperature: (A) 0.3 °C / (C) 0.2 °C Analyst Init: BBP

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
MicroBIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/6080										
QT EPA 515.1/6150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 545										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: AW Date/Time: 5-21-00 2215 Rev 21 05/23/2016  
 A = Actual / C = Corrected (S:\WPDoc\Word\Perfec\LAB\_DOC\FORMS\COCCREV 20)



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 20:44  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916318-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	05/21/2019 15:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	NUN-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916318-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	05/21/2019 14:50
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	NUN-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916318-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	05/21/2019 15:49
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	NUN-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916318-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	05/21/2019 16:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	NUN-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916318-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/21/2019 22:00
	<b>Project Number:</b>	Jose Nunes Dairy	<b>Sampling Date:</b>	05/21/2019 15:10
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	NUN-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 20:44  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916318-01	<b>Client Sample Name:</b> Jose Nunes Dairy, NUN-MW1s, 5/21/2019 3:30:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	3.8	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	4700	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.093	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 09:00	05/22/19 10:37	SAV	IC5	10	B046984
2	SM-2540C	05/24/19 16:30	05/24/19 16:30	CAD	MANUAL	20	B047166
3	EPA-350.1	06/04/19 16:30	06/05/19 14:42	JMH2	SC-1	1	B047981

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Woodland, CA 95695

**Reported:** 06/10/2019 20:44  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916318-02	<b>Client Sample Name:</b> Jose Nunes Dairy, NUN-MW2s, 5/21/2019 2:50:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	18	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2900	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.12	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 09:00	05/22/19 11:49	SAV	IC5	5	B046984
2	SM-2540C	05/24/19 16:30	05/24/19 16:30	CAD	MANUAL	10	B047166
3	EPA-350.1	06/04/19 16:30	06/05/19 14:44	JMH2	SC-1	1	B047981

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**Reported:** 06/10/2019 20:44  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916318-03	<b>Client Sample Name:</b> Jose Nunes Dairy, NUN-MW3s, 5/21/2019 3:49:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	20	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	5000	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.13	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 09:00	05/22/19 12:07	SAV	IC5	10	B046984
2	SM-2540C	05/24/19 16:30	05/24/19 16:30	CAD	MANUAL	20	B047166
3	EPA-350.1	06/04/19 16:30	06/05/19 14:46	JMH2	SC-1	1	B047981

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**Reported:** 06/10/2019 20:44  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916318-04	<b>Client Sample Name:</b> Jose Nunes Dairy, NUN-MW4s, 5/21/2019 4:10:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	3.5	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	7800	mg/L	500	250	SM-2540C	ND		2
Ammonia as N	0.10	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 09:00	05/22/19 12:25	SAV	IC5	10	B046984
2	SM-2540C	05/24/19 16:30	05/24/19 16:30	CAD	MANUAL	50	B047166
3	EPA-350.1	06/04/19 16:30	06/05/19 14:47	JMH2	SC-1	1	B047981

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500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 20:44  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916318-05	<b>Client Sample Name:</b> Jose Nunes Dairy, NUN-MW5s, 5/21/2019 3:10:00PM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	ND	mg/L	1.0	0.42	EPA-300.0	ND	A07	1
<b>Total Dissolved Solids @ 180 C</b>	<b>6600</b>	<b>mg/L</b>	<b>500</b>	<b>250</b>	<b>SM-2540C</b>	ND		2
Ammonia as N	0.086	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 09:00	05/22/19 12:42	SAV	IC5	10	B046984
2	SM-2540C	05/24/19 16:30	05/24/19 16:30	CAD	MANUAL	50	B047166
3	EPA-350.1	06/04/19 16:30	06/05/19 14:48	JMH2	SC-1	1	B047981

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Woodland, CA 95695

**Reported:** 06/10/2019 20:44  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B046984</b>						
Nitrate as N	B046984-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047166</b>						
Total Dissolved Solids @ 180 C	B047166-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B047981</b>						
Ammonia as N	B047981-BLK1	ND	mg/L	0.20	0.067	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 20:44  
Project: Dairy Representative Monitoring Program  
Project Number: Jose Nunes Dairy  
Project Manager: Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046984</b>										
Nitrate as N	B046984-BS1	LCS	4.8470	5.0000	mg/L	96.9		90 - 110		
<b>QC Batch ID: B047166</b>										
Total Dissolved Solids @ 180 C	B047166-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B047981</b>										
Ammonia as N	B047981-BS1	LCS	0.94700	1.0000	mg/L	94.7		90 - 110		

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 20:44  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B046984</b>		Used client sample: Y - Description: NUN-MW1s, 05/21/2019 15:30								
Nitrate as N	DUP	1916318-01	3.7900	4.3500		mg/L	13.8		10	A02
	MS	1916318-01	3.7900	53.172	50.505	mg/L		97.8	80 - 120	
	MSD	1916318-01	3.7900	53.131	50.505	mg/L	0.1	97.7	10 80 - 120	
<b>QC Batch ID: B047166</b>		Used client sample: N								
Total Dissolved Solids @ 180 C	DUP	1916294-01	30900	31300		mg/L	1.3		10	
<b>QC Batch ID: B047981</b>		Used client sample: N								
Ammonia as N	DUP	1916317-05	0.089900	0.092400		mg/L	2.7		10	J
	MS	1916317-05	0.089900	1.1337	1.1111	mg/L		93.9	90 - 110	
	MSD	1916317-05	0.089900	1.1651	1.1111	mg/L	2.7	96.8	10 90 - 110	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/10/2019 20:44  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Jose Nunes Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 06/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Moonshine Dairy

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916624

Invoice ID: B343287

Enclosed are the results of analyses for samples received by the laboratory on 5/23/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916624

Samples were filtered through a 0.45 micron filter prior to analysis.



<b>BC Laboratories, Inc.</b>		<b>Chain of Custody</b>			
19-16624		4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911			
<b>Report to:</b> Reduced Constituent Suite					
Name: Luhdorff and Scalmanini		Analysis Requested			
Address: 500 First Street		From Filtered Sample:			
City: Woodland		Ammonia-N, NO3-N, Total Dissolved Solids			
State: 95695					
Attn: Tili Angermann					
Project: Dairy Representative Monitoring Program					
Site: Moonshine Dairy					
Samplers Name: Del Tech / Tracy Dight					
Global ID - GADAIRY00017					
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Ol Pe Unpreserved
-1	MOO-MW1	5-23-19	14:57	GW	x
-2	MOO-MW2		14:21		x
-3	MOO-MW3		13:30		x
-4	MOO-MW4		12:45		x
-5	MOO-MW5s, [redacted]		13:56		x
-6	MOO-MW6s, [redacted]		15:22		x
-7	MOO-MW7s, [redacted]		15:54		x
-8	[redacted], MOO-MW8d		16:22		x
9	Field Duplicate				x
10					
11					
12					

SHORT FLUSHING TIME  
 Cl<sup>-</sup> NO<sub>2</sub> NO<sub>3</sub> OP SS  
 DO Cl<sub>2</sub> BOB MBAS COT

CHK BY DISTRIBUTION  
 [Signature]

SUB OUT

Received By: [Signature] Date & Time: 5/23/19 16:35

Received By: [Signature] Date & Time: 5/23/19 22:00

Received By: [Signature] Date & Time: [blank]

Relinquished by: [Signature] 5-23-19

Relinquished by: [Signature]

Relinquished by: [Signature]

Comments:  
 1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.  
 2) Lab reports shall identify sampled wells exactly as shown on this CoC.  
 3) Send lab reports to Luhdorff and Scalmanini Consulting Engineers via email: llavagnino@lsce.com, rnyson@lsce.com, pdhalliwat@lsce.com, jlovelis@lsce.com  
 4) Send invoices to Joannette Lovelis: jlovelis@lsce.com.

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-16624

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify)

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify)

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals: Ice Chest  Containers  Intact? Yes  No  Intact? Yes  No  None  Comments:

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: TE Thermometer ID: 208 Date/Time: 5/23/2008

Temperature: (A) 1.6 °C / (C) 1.5 °C Analyst Init: EMC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 528/608/8280										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml RPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
QT EPA 8270										
8oz / 16oz / 32oz AMBR										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCE VIAL										
PLASTIC BAG										
FEDLAR BAG										
FEROUS IRON										
SCORE										
MART KIT										
UMMA CANISTER										

Comments: Sample Numbering Completed By: [Signature] Date/Time: 5-23-08 229 Rev 21 05/23/2016

= Actual / C = Corrected



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 15:57  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916624-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Moonshine Dairy	<b>Sampling Date:</b>	05/23/2019 14:57
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MOO-MW1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916624-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Moonshine Dairy	<b>Sampling Date:</b>	05/23/2019 14:21
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MOO-MW2	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916624-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Moonshine Dairy	<b>Sampling Date:</b>	05/23/2019 13:30
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MOO-MW3	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916624-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Moonshine Dairy	<b>Sampling Date:</b>	05/23/2019 12:45
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MOO-MW4	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916624-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/23/2019 22:00
	<b>Project Number:</b>	Moonshine Dairy	<b>Sampling Date:</b>	05/23/2019 13:56
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MOO-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del Tech / Stacy Light of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 15:57  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1916624-06</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/23/2019 22:00
	<b>Project Number:</b> Moonshine Dairy	<b>Sampling Date:</b> 05/23/2019 15:22
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MOO-MW6s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916624-07</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/23/2019 22:00
	<b>Project Number:</b> Moonshine Dairy	<b>Sampling Date:</b> 05/23/2019 15:54
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MOO-MW7s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916624-08</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/23/2019 22:00
	<b>Project Number:</b> Moonshine Dairy	<b>Sampling Date:</b> 05/23/2019 16:22
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MOO-MW8d	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del Tech / Stacy Light of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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Woodland, CA 95695

**Reported:** 06/12/2019 15:57  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916624-01	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW1, 5/23/2019 2:57:00PM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	6.4	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.45	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 08:01		SAV	IC8	2	B047180
2	SM-2540C	05/30/19 14:00	05/30/19 14:00		CAD	MANUAL	10	B047526
3	EPA-350.1	06/07/19 15:00	06/10/19 15:37		JMH	SC-1	1	B048257

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**Reported:** 06/12/2019 15:57  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916624-02	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW2, 5/23/2019 2:21:00PM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	30	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.090	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 09:24		SAV	IC8	5	B047180
2	SM-2540C	05/30/19 14:00	05/30/19 14:00		CAD	MANUAL	10	B047526
3	EPA-350.1	06/07/19 15:00	06/10/19 15:41		JMH	SC-1	1	B048257

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**Reported:** 06/12/2019 15:57  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916624-03	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW3, 5/23/2019 1:30:00PM, Del Tech / Stacy Light
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	2.6	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1300	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 09:44		SAV	IC8	2	B047180
2	SM-2540C	05/30/19 14:00	05/30/19 14:00		CAD	MANUAL	10	B047526
3	EPA-350.1	06/07/19 15:00	06/10/19 15:42		JMH	SC-1	1	B048257

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**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916624-04	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW4, 5/23/2019 12:45:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	9.3	mg/L	0.10	0.042	EPA-300.0	ND		1
Total Dissolved Solids @ 180 C	1200	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.11	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 10:05	SAV	IC8	1	B047180
2	SM-2540C	05/30/19 14:00	05/30/19 14:00	CAD	MANUAL	5	B047526
3	EPA-350.1	06/07/19 15:00	06/10/19 15:43	JMH	SC-1	1	B048257

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**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916624-05	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW5s, 5/23/2019 1:56:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	17	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1600	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 10:25		SAV	IC8	2	B047180
2	SM-2540C	05/30/19 14:00	05/30/19 14:00		CAD	MANUAL	10	B047526
3	EPA-350.1	06/07/19 15:00	06/10/19 15:44		JMH	SC-1	1	B048257

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**Reported:** 06/12/2019 15:57  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916624-06	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW6s, 5/23/2019 3:22:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	9.2	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1500	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.11	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 11:27		SAV	IC8	2	B047180
2	SM-2540C	05/30/19 14:00	05/30/19 14:00		CAD	MANUAL	10	B047526
3	EPA-350.1	06/07/19 15:00	06/10/19 15:46		JMH	SC-1	1	B048257

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**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916624-07	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW7s, 5/23/2019 3:54:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	39	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2100	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.099	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 11:47		SAV	IC8	2	B047180
2	SM-2540C	05/30/19 14:00	05/30/19 14:00		CAD	MANUAL	10	B047526
3	EPA-350.1	06/07/19 15:00	06/10/19 15:48		JMH	SC-1	1	B048257

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**Reported:** 06/12/2019 15:57  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916624-08	<b>Client Sample Name:</b> Moonshine Dairy, MOO-MW8d, 5/23/2019 4:22:00PM, Del Tech / Stacy Light
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	14	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1400	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	0.11	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/23/19 18:00	05/24/19 12:08		SAV	IC8	2	B047180
2	SM-2540C	05/30/19 14:00	05/30/19 14:00		CAD	MANUAL	5	B047526
3	EPA-350.1	06/07/19 15:00	06/10/19 15:48		JMH	SC-1	1	B048257

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**Reported:** 06/12/2019 15:57  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047180</b>						
Nitrate as N	B047180-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047526</b>						
Total Dissolved Solids @ 180 C	B047526-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048257</b>						
Ammonia as N	B048257-BLK1	ND	mg/L	0.20	0.067	

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**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047180</b>										
Nitrate as N	B047180-BS1	LCS	5.2540	5.0000	mg/L	105		90 - 110		
<b>QC Batch ID: B047526</b>										
Total Dissolved Solids @ 180 C	B047526-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
<b>QC Batch ID: B048257</b>										
Ammonia as N	B048257-BS1	LCS	0.95090	1.0000	mg/L	95.1		90 - 110		

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**Reported:** 06/12/2019 15:57  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B047180</b>		Used client sample: Y - Description: MOO-MW1, 05/23/2019 14:57								
Nitrate as N	DUP	1916624-01	6.3900	6.3380		mg/L	0.8		10	
	MS	1916624-01	6.3900	17.337	10.101	mg/L		108	80 - 120	
	MSD	1916624-01	6.3900	17.360	10.101	mg/L	0.1	109	10	80 - 120
<b>QC Batch ID: B047526</b>		Used client sample: Y - Description: MOO-MW1, 05/23/2019 14:57								
Total Dissolved Solids @ 180 C	DUP	1916624-01	1610.0	1640.0		mg/L	1.8		10	
<b>QC Batch ID: B048257</b>		Used client sample: Y - Description: MOO-MW1, 05/23/2019 14:57								
Ammonia as N	DUP	1916624-01	0.45390	0.39850		mg/L	13.0		10	A02
	MS	1916624-01	0.45390	1.5028	1.1111	mg/L		94.4	90 - 110	
	MSD	1916624-01	0.45390	1.4992	1.1111	mg/L	0.2	94.1	10	90 - 110

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 15:57  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Moonshine Dairy  
**Project Manager:** Till Angermann

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.





Date of Report: 06/12/2019

Till Angermann

Luhdorf & Scalmanini

500 First Street

Woodland, CA 95695

Client Project: Tony L. Lopes Dairy LP

BCL Project: Dairy Representative Monitoring Program

BCL Work Order: 1916471

Invoice ID: B343191

Enclosed are the results of analyses for samples received by the laboratory on 5/22/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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## Case Narratives

### Case Narrative for Work Order 1916471

Samples were filtered through a 0.45 micron filter prior to analysis



<b>BC Laboratories, Inc.</b>		<b>Chain of Custody</b>				
4100 Atlas Ct. Bakersfield, CA 93308 (661) 327-4911						
<b>Report to:</b>						
Reduced Constituent Suite						
Project: Dairy Representative Monitoring Program						
Site: Tony L. Lopes Dairy LP						
Samplers Name: <i>Deitech Ashley Robinson</i>						
Global ID - GADAIR700018						
From Filtered Sample: Ammonia-N, NO3-N, Total Dissolved Solids						
<b>Analysis Requested</b>						
Lab #	Strike out non-sampled wells	Date Sampled	Time Sampled	Matrix	Cl Pe Unpreserved	Other
- 1	TON-MW1s, <del>TON-MW2s, TON-MW3s, TON-MW4s, TON-MW5s, TON-MW6s, TON-MW7s, TON-MW8s</del>	5/22/19	1304	GW	x	
- 2	<del>TON-MW1s, TON-MW2s, TON-MW3s, TON-MW4s, TON-MW5s, TON-MW6s, TON-MW7s, TON-MW8s</del>		1332		x	
- 3	<del>TON-MW1s, TON-MW2s, TON-MW3s, TON-MW4s, TON-MW5s, TON-MW6s, TON-MW7s, TON-MW8s</del>		1434		x	
- 4	<del>TON-MW1s, TON-MW2s, TON-MW3s, TON-MW4s, TON-MW5s, TON-MW6s, TON-MW7s, TON-MW8s</del>		1411		x	
- 5	<del>TON-MW1s, TON-MW2s, TON-MW3s, TON-MW4s, TON-MW5s, TON-MW6s, TON-MW7s, TON-MW8s</del>		1458		x	
- 6	<del>TON-MW1s, TON-MW2s, TON-MW3s, TON-MW4s, TON-MW5s, TON-MW6s, TON-MW7s, TON-MW8s</del>		1300		x	
- 7	<del>TON-MW1s, TON-MW2s, TON-MW3s, TON-MW4s, TON-MW5s, TON-MW6s, TON-MW7s, TON-MW8s</del>		1148		x	
- 8	<del>TON-MW1s, TON-MW2s, TON-MW3s, TON-MW4s, TON-MW5s, TON-MW6s, TON-MW7s, TON-MW8s</del>		1216		x	
- 9	Field Duplicate				x	
10						
11						
12						

**Comments:**

1) Where indicated, samples shall be filtered (0.45µm) in the lab to remove turbidity.

2) Lab reports shall identify sampled wells exactly as shown on this CoC.

3) Send lab reports to Luhdorff and Scammini Consulting Engineers via email: llavagnino@lscce.com, rbvysom@lscce.com, pthaliwal@lscce.com, jlovelis@lscce.com

4) Send invoices to Jeanette Lovell (jlovelis@lscce.com).

Relinquished by: (Signature) *Johny Robinson* / 1640 Date & Time 5/22/19 16:40

Relinquished by: (Signature) *[Signature]* Date & Time 5/22/19 22:15

Relinquished by: (Signature) *[Signature]* Date & Time 5/22/19 22:15

DU Cl<sub>2</sub> BOP MBAS COT

SHORT HOLDING TIME

Cl<sub>2</sub> NO<sub>3</sub> (NO) OP SS

CHKBY *[Signature]* DISTRIBUTION

SUB OUT

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-16471

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time: 5/22/2015

Temperature: (A) 1.4 °C / (C) 1.3 °C Analyst Init: GML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	A	A	A	A	A	A	A	A	A	
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 50503/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Date/Time: 5/22/15 9:30 Rev 21 05/23/2016



Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1916471-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Tony L. Lopes Dairy	<b>Sampling Date:</b>	05/22/2019 13:54
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW1s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916471-02	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Tony L. Lopes Dairy	<b>Sampling Date:</b>	05/22/2019 13:32
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW2s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916471-03	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Tony L. Lopes Dairy	<b>Sampling Date:</b>	05/22/2019 14:34
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW3s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916471-04	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Tony L. Lopes Dairy	<b>Sampling Date:</b>	05/22/2019 14:11
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW4s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	
1916471-05	<b>COC Number:</b>	---	<b>Receive Date:</b>	05/22/2019 22:15
	<b>Project Number:</b>	Tony L. Lopes Dairy	<b>Sampling Date:</b>	05/22/2019 14:58
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	TON-MW5s	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Del-Tech/Ashley of DTO	<b>Sample Type:</b>	Groundwater
			Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time	

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1916471-06</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b> Tony L. Lopes Dairy	<b>Sampling Date:</b> 05/22/2019 13:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> TON-MW6s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916471-07</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b> Tony L. Lopes Dairy	<b>Sampling Date:</b> 05/22/2019 11:48
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> TON-MW7s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916471-08</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b> Tony L. Lopes Dairy	<b>Sampling Date:</b> 05/22/2019 12:16
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> TON-MW8s	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

<b>1916471-09</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 05/22/2019 22:15
	<b>Project Number:</b> Tony L. Lopes Dairy	<b>Sampling Date:</b> 05/22/2019 00:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> Field Duplicate 6	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Del-Tech/Ashley of DTO	<b>Sample Type:</b> Groundwater
		Metal Analysis: 2-Lab Filtered and Acidified past 15 minute holding time

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500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916471-01	<b>Client Sample Name:</b> Tony L. Lopes Dairy, TON-MW1s, 5/22/2019 1:54:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	29	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	1800	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	48	mg/L	5.0	1.7	EPA-350.1	ND	A07	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 01:36		SAV	IC1	2	B047075
2	SM-2540C	05/28/19 14:00	05/28/19 14:00		CAD	MANUAL	10	B047353
3	EPA-350.1	06/05/19 16:00	06/06/19 16:10		JMH	SC-1	25	B048066

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916471-02	<b>Client Sample Name:</b> Tony L. Lopes Dairy, TON-MW2s, 5/22/2019 1:32:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	28	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	3200	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	1.8	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 03:00		SAV	IC1	5	B047075
2	SM-2540C	05/28/19 14:00	05/28/19 14:00		CAD	MANUAL	20	B047353
3	EPA-350.1	06/05/19 16:00	06/06/19 15:49		JMH	SC-1	1	B048066

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916471-03	<b>Client Sample Name:</b> Tony L. Lopes Dairy, TON-MW3s, 5/22/2019 2:34:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	9.0	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	3300	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	4.0	mg/L	1.0	0.34	EPA-350.1	ND	A07	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 13:10	TMS	IC1	5	B047075
2	SM-2540C	05/28/19 14:00	05/28/19 14:00	CAD	MANUAL	20	B047353
3	EPA-350.1	06/05/19 16:00	06/06/19 16:12	JMH	SC-1	5	B048066

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916471-04	<b>Client Sample Name:</b> Tony L. Lopes Dairy, TON-MW4s, 5/22/2019 2:11:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	40	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2400	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.084	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 03:42	SAV	IC1	5	B047075
2	SM-2540C	05/28/19 14:00	05/28/19 14:00	CAD	MANUAL	10	B047353
3	EPA-350.1	06/05/19 16:00	06/06/19 15:51	JMH	SC-1	1	B048066

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500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916471-05	<b>Client Sample Name:</b> Tony L. Lopes Dairy, TON-MW5s, 5/22/2019 2:58:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	75	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.086	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 04:03	SAV	IC1	5	B047075
2	SM-2540C	05/28/19 14:00	05/28/19 14:00	CAD	MANUAL	10	B047353
3	EPA-350.1	06/05/19 16:00	06/06/19 15:53	JMH	SC-1	1	B048066

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916471-06	<b>Client Sample Name:</b> Tony L. Lopes Dairy, TON-MW6s, 5/22/2019 1:00:00PM, Del-Tech/Ashley
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	6.3	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2200	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.078	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 05:06	SAV	IC1	2	B047075
2	SM-2540C	05/28/19 14:00	05/28/19 14:00	CAD	MANUAL	10	B047353
3	EPA-350.1	06/05/19 16:00	06/06/19 15:53	JMH	SC-1	1	B048066

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916471-07	<b>Client Sample Name:</b> Tony L. Lopes Dairy, TON-MW7s, 5/22/2019 11:48:00AM, Del-Tech/Ashley
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	0.51	mg/L	0.20	0.084	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	980	mg/L	50	25	SM-2540C	ND		2
Ammonia as N	ND	mg/L	0.20	0.067	EPA-350.1	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 05:27		SAV	IC1	2	B047075
2	SM-2540C	05/28/19 14:00	05/28/19 14:00		CAD	MANUAL	5	B047353
3	EPA-350.1	06/05/19 16:00	06/06/19 15:54		JMH	SC-1	1	B048066

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Luhdorf & Scalmanini  
500 First Street  
Woodland, CA 95695

**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916471-08	<b>Client Sample Name:</b> Tony L. Lopes Dairy, TON-MW8s, 5/22/2019 12:16:00PM, Del-Tech/Ashley
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	35	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	3900	mg/L	200	100	SM-2540C	ND		2
Ammonia as N	0.094	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 05:48		SAV	IC1	5	B047075
2	SM-2540C	05/28/19 14:00	05/28/19 14:00		CAD	MANUAL	20	B047353
3	EPA-350.1	06/05/19 16:00	06/06/19 15:55		JMH	SC-1	1	B048066

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**Reported:** 06/12/2019 11:28  
**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1916471-09	<b>Client Sample Name:</b> Tony L. Lopes Dairy, Field Duplicate 6, 5/22/2019 12:00:00AM, Del-Tech/Ashley
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate as N	75	mg/L	0.50	0.21	EPA-300.0	ND	A07	1
Total Dissolved Solids @ 180 C	2000	mg/L	100	50	SM-2540C	ND		2
Ammonia as N	0.086	mg/L	0.20	0.067	EPA-350.1	ND	J	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/22/19 23:00	05/23/19 06:09	SAV	IC1	5	B047075
2	SM-2540C	05/28/19 14:00	05/28/19 14:00	CAD	MANUAL	10	B047353
3	EPA-350.1	06/06/19 10:30	06/07/19 09:34	JMH	SC-1	1	B048151

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**Project:** Dairy Representative Monitoring Program  
**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B047075</b>						
Nitrate as N	B047075-BLK1	ND	mg/L	0.10	0.042	
<b>QC Batch ID: B047353</b>						
Total Dissolved Solids @ 180 C	B047353-BLK1	ND	mg/L	6.7	3.3	
<b>QC Batch ID: B048066</b>						
Ammonia as N	B048066-BLK1	ND	mg/L	0.20	0.067	
<b>QC Batch ID: B048151</b>						
Ammonia as N	B048151-BLK1	ND	mg/L	0.20	0.067	

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**Project Number:** Tony L. Lopes Dairy LP  
**Project Manager:** Till Angermann

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B047075</b>										
Nitrate as N	B047075-BS1	LCS	5.2060	5.0000	mg/L	104		90 - 110		
<b>QC Batch ID: B047353</b>										
Total Dissolved Solids @ 180 C	B047353-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
<b>QC Batch ID: B048066</b>										
Ammonia as N	B048066-BS1	LCS	1.0758	1.0000	mg/L	108		90 - 110		
<b>QC Batch ID: B048151</b>										
Ammonia as N	B048151-BS1	LCS	0.97660	1.0000	mg/L	97.7		90 - 110		

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**Project Manager:** Till Angermann

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B047075</b>		Used client sample: Y - Description: TON-MW1s, 05/22/2019 13:54								
Nitrate as N	DUP	1916471-01	28.920	29.098		mg/L	0.6		10	
	MS	1916471-01	28.920	38.901	10.101	mg/L		98.8		80 - 120
	MSD	1916471-01	28.920	39.176	10.101	mg/L	0.7	102	10	80 - 120
<b>QC Batch ID: B047353</b>		Used client sample: Y - Description: TON-MW1s, 05/22/2019 13:54								
Total Dissolved Solids @ 180 C	DUP	1916471-01	1820.0	1800.0		mg/L	1.1		10	
<b>QC Batch ID: B048066</b>		Used client sample: N								
Ammonia as N	DUP	1916420-02	ND	ND		mg/L			10	
	MS	1916420-02	ND	1.1971	1.1111	mg/L		108		90 - 110
	MSD	1916420-02	ND	1.2064	1.1111	mg/L	0.8	109	10	90 - 110
<b>QC Batch ID: B048151</b>		Used client sample: N								
Ammonia as N	DUP	1916472-01	0.10620	0.11200		mg/L	5.3		10	J
	MS	1916472-01	0.10620	1.1338	1.0000	mg/L		103		90 - 110
	MSD	1916472-01	0.10620	1.1346	1.0000	mg/L	0.1	103	10	90 - 110

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**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.