Livingston Dairy Consulting, Inc.

1635 E. Propserity Ave., Ste B, Tulare
559-687-1440

Tjaarda Dairy WDID 5D15509001
19211 Magnolia Avenue Shafter, CA 93263

X	Annual Report
X	Water Analysis Samples
X	Manure Manifest
N/A	Facility / Land Map
N/A	CCA Nitrogen Retrofit Report

GEO Tracker Confirmation # **Date:**

Facility Info

Reporting Period: **1/1/2023** **to** **12/31/2023**

Name of the Facility

Dairy Name:	Tjaarda Dairy WDID 5D15509001
Facility Address:	19211 Magnolia Avenue Shafter, CA 93263
Original Operation Date:	11/5/1999
Facility APN's:	x088 x220 x016 xxxx
RWQCB Basin Plan Designation:	Tulare Lake Basin

☐ Check if any information has changed

Owner(s)

Owner(s) Name:	Perry Tjaarda
Mailing Address:	19211 Magnolia Avenue Shafter, CA 93263
Home Phone Number:	
Cell Phone Number:	661-428-3270

☐ Check if any information has changed

Operator(s)

Operator(s) Name:	Same as owner
Mailing Address:	
Home Phone Number:	
Cell Phone Number:	

☐ Check if any information has changed

Herd Information

	Milk Cows	Dry Cows	Bred Heifers (12-24 mo)	Heifers (3-12 mo)	Calves (0-3 mo)
Open Confinement:	3,227	510	1,131	997	260
Number Under Roof	-	-	-	-	-
Maximum Number	3,227	510	1,131	997	260
Average Number	3,227	510	1,131	997	260
Average Live Weight (lbs)	900	950	660	370	

Average Milk Production: 70

Predominant Milk Cow Breed: Jersey-Holstein Cross

Manure Generated:

Total manure excreted by the herd:	13,394.65	@40% Moisture	*ton/yr*
Total nitrogen from manure:	843,899		*lbs*
	98,424		*lbs*
	259,594		*lbs*
Total salt from manure:	-		*lbs*

After Ammonia (30% loss applied)

590,729 *lbs per reporting period*

Process Wastewater Generated:

Process wastewater generated:	47,114,200	*gal*
Total nitrogen generated:	303,731	*lbs*
	113,490	*lbs*
	343,655	*lbs*
Total salt (TDS) generated:	2,048,101	*lbs*

List of Land Application Areas

Field Name	APN	APN Acres	Cropable Acres	Total Harvest	Type of Waste Applied
3 (Trees)	x088 x190 x020 xxxx		58	0	N/A
4 (Trees)	x088 x190 x020 xxxx		58	0	N/A
5	x088 x220 x017 xxxx	235	112	2	P.W. & D.M.
6	x088 x220 x017 xxxx		110	2	P.W. & D.M.
7	x088 x220 x031 xxxx, x088 x220 x032 xxxx	39	37	2	P.W. & D.M.
8	x088 x220 x015 xxxx, x088 x220 x021 xxxx, x088 x220 x022 xxxx, x088 x220 x023 xxxx		75	2	P.W. & D.M.
9 (Trees)	x088 x220 x016 xxxx		8	0	N/A
1 (Trees)	x088 x220 x015 xxxx, x088 x220 x021 xxxx, x088 x220 x022 xxxx, x088 x220 x023 xxx	478	67	0	N/A
2 (Trees)	x088 x220 x015 xxxx, x088 x220 x021 xxxx, x088 x220 x022 xxxx, x088 x220 x023 xxxx		40	0	N/A
10	x088 x220 x019 xxxx	40	38	2	P.W. & D.M.
Total Crop Acres			602.50		

List of Fresh Water Sources

Source Description	Type	Subsurface (Tile) Drainage Sources
Barn 1	Ground Water	No
2	Ground Water	No
3	Ground Water	No
4	Ground Water	No
5	Ground Water	No
6	Ground Water	No
7	Ground Water	No
8	Ground Water	No
Canal	Surface Water	No

(WINTER) PLANT TISSUE ANALYSIS (Recorded As Received)										
Field	**Crop**	**Moist %**	**N%**	**TP %**	**TK%**	**Salt**	**TFS**	**Sample #:**	**Date:**	**Source**
3 (Trees)	Trees, Almonds	-	6.50	2.50	8.50	-	-	Book Value		-
4 (Trees)	Trees, Almonds	-	6.50	2.50	8.50	-	-	Book Value		-
5	Wheat, Silage	70.50	0.55	0.09	0.45	-	10.70	4-26H47753	04/26/23	Valley Tech
6	Wheat, Silage	65.70	0.53	0.10	0.66	-	9.36	6-1H51909	06/01/23	Valley Tech
7	Wheat, Silage	54.40	0.67	0.16	1.11	-	11.70	6-6H52637	06/06/23	Valley Tech
8	Wheat, Silage	57.60	0.56	0.12	0.86	-	9.43	6-1H51909	06/01/23	Valley Tech
9 (Trees)	Trees, Almonds	-	6.50	2.50	8.50	-	-	Book Value		-
1 (Trees)	Trees, Almonds	-	6.50	2.50	8.50	-	-	Book Value		-
2 (Trees)	Trees, Almonds	-	6.50	2.50	8.50	-	-	Book Value		-
10	Wheat, Silage	51.80	0.83	0.18	1.32	-	10.40	6-6H52637	06/06/23	Valley Tech
0										
0										
0										
0										
0										
Detectable Lim Valley Tech		*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*			
Dellavalle		*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*			
Detectable Limits										
Valley Tech		*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*			
Dellavalle		*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*			

(SUMMER) PLANT TISSUE ANALYSIS (Recorded As Received)										
Field	**Crop**	**Moist %**	**N%**	**TP %**	**TK%**	**Salt**	**TFS**	**Sample #:**	**Date:**	**Source**
3 (Trees)	Trees, Almonds	-	-	-	-	-	-	Trees		-
4 (Trees)	Trees, Almonds	-	-	-	-	-	-	Trees		-
5	Corn, Silage	71.60	0.53	0.09	0.49	-	7.29	11-10H72594	11/10/23	Valley Tech
6	Corn, Silage	73.10	0.38	0.08	0.28	-	6.67	10-19H70150	10/19/23	Valley Tech
7	Corn, Silage	60.40	0.41	0.10	0.43	-	6.17	10-467950	10/04/23	Valley Tech
8	Corn, Silage	67.10	0.53	0.08	0.47	-	6.98	10-19H70150	10/19/23	Valley Tech
9 (Trees)	Trees, Almonds	-	-	-	-	-	-	Trees		-
1 (Trees)	Trees, Almonds	-	-	-	-	-	-	Trees		-
2 (Trees)	Trees, Almonds	-	-	-	-	-	-	Trees		-
10	Corn, Silage	68.60	0.46	0.08	0.41	-	5.94	11-10H72594	11/10/23	Valley Tech

Detectable Limits					
Valley Tech	*0.10%*	*0.05%*	*0.01%*	*0.01%*	*0.05%*
Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*	*0.001%*

Winter Crops & Harvest

Field:	Crop	Plant Date	Harvest Date	Lab #	Moisture %	N (mg//kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS	Reporting Basis
3 (Trees)	Trees, Almonds	1/1/22	11/1/23	Book Value	-	6.50	2.50	8.50	-	-	Dry Weight
4 (Trees)	Trees, Almonds	1/1/22	11/1/23	Book Value	-	6.50	2.50	8.50	-	-	Dry Weight
5	Wheat, Silage	10/25/22	4/18/23	4-26H47753	70.50	0.55	0.09	0.45	-	10.70	Dry Weight
6	Wheat, Silage	11/16/22	5/24/23	6-1H51909	65.70	0.53	0.10	0.66	-	9.36	Dry Weight
7	Wheat, Silage	11/2/22	5/11/23	6-6H52637	54.40	0.67	0.16	1.11	-	11.70	Dry Weight
8	Wheat, Silage	11/3/22	5/11/23	6-1H51909	57.60	0.56	0.12	0.86	-	9.43	Dry Weight
9 (Trees)	Trees, Almonds	1/1/18	11/1/23	Book Value	-	6.50	2.50	8.50	-	-	Dry Weight
1 (Trees)	Trees, Almonds	1/1/18	11/1/23	Book Value	-	6.50	2.50	8.50	-	-	Dry Weight
2 (Trees)	Trees, Almonds	1/1/18	11/1/23	Book Value	-	6.50	2.50	8.50	-	-	Dry Weight
10	Wheat, Silage	11/3/22	5/11/23	6-6H52637	51.80	0.83	0.18	1.32	-	10.40	Dry Weight

Detectable L Valley Tech	*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*
Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*

Field:	Crop	Plant Date	Harvest Date	Lab #	Moisture %	N (mg//kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS	Reporting Basis
3 (Trees)	Trees, Almonds			Trees	-	-	-	-	-	-	
4 (Trees)	Trees, Almonds			Trees	-	-	-	-	-	-	
5	Corn, Silage	5/15/23	8/28/23	11-10H72594	71.60	0.53	0.09	0.49	-	7.29	Dry Weight
6	Corn, Silage	7/7/23	10/15/23	10-19H70150	73.10	0.38	0.08	0.28	-	6.67	Dry Weight
7	Corn, Silage	5/28/23	9/9/23	10-467950	60.40	0.41	0.10	0.43	-	6.17	Dry Weight
8	Corn, Silage	6/8/23	9/26/23	10-19H70150	67.10	0.53	0.08	0.47	-	6.98	Dry Weight
9 (Trees)	Trees, Almonds			Trees	-	-	-	-	-	-	
1 (Trees)	Trees, Almonds			Trees	-	-	-	-	-	-	
2 (Trees)	Trees, Almonds			Trees	-	-	-	-	-	-	
10	Corn, Silage	6/2/23	9/26/23	11-10H72594	68.60	0.46	0.08	0.41	-	5.94	Dry Weight

Detectable L Valley Tech	*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*
Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*

Well / Canal Analysis

General Minerals

Well Name/Number	NO3-N (mg/L)	EC (umhos/cm)	TDS (mg/L)	NH4-N (mg/L)	TN (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	HCO3 (mg/L)	CO3 (mg/L)	SO4 (mg/L)	Cl (mg/L)	Lab #:	Date:	LAB
Barn 1	3.30	582	320	-	3.30	-	-	-	-	-	-	-	VI 2340878	2/10/2023	FGL Enviromental
2	5.40	748	450	-	5.40	-	-	-	-	-	-	-	VI 2342521	4/26/2023	FGL Enviromental
3	7.40	814	490	-	7.40	-	-	-	-	-	-	-	VI 2342521	4/26/2023	FGL Enviromental
4	6.20	526	330	-	6.20	-	-	-	-	-	-	-	VI 2344460	7/11/2023	FGL Enviromental
5	-	-	-	-	-	-	-	-	-	-	-	-	Non-Op		
6	5.60	981	600	-	5.60	-	-	-	-	-	-	-	VI 2344460	7/11/2023	FGL Enviromental
7	11.00	1,340	910	-	11.00	-	-	-	-	-	-	-	VI 2342521	4/26/2023	FGL Enviromental
8	0.50	1,860	1,130	-	0.50	-	-	-	-	-	-	-	VI 2342521	4/26/2023	FGL Enviromental
Canal	0.01	320	-	-	-	14.00	2.30	49.00	0.01	0.01	6.70	37.00	2307664-05	10/3/2023	Other

Detectable Limits												
Dellavalle	*0.01*	*1*	*10*	*0.2*	*NR*	*0.1*	*0.1*	*0.15*	*3*	*0.9*	*0.03*	*0.03*
FGL Enviromental	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Valley Tech	*0.1*	*1*	*NR*	*NR*	*NR*	*NR*	*NR*	*NR*	*NR*	*NR*	*NR*	*NR*

Soil Analysis (Winter)

Fields:	0/1ft. NO3-N (mg/kg)	1/2 ft. NO3-N (mg/kg)	0/1 ft. Sol. P (mg/kg)	0/1 ft. K (mg/kg)	0/1 ft. EC (ds/m)	OM %	Lab #	Date	Source
3 (Trees)	-	-	-	-	-	-			-
4 (Trees)	-	-	-	-	-	-			-
5	22.1	12.60	78.20	729.00	1.39	3.22	11-13S72883	11/17/23	Valley Tech
6	18.5	11.80	96.60	1,350.00	1.33	3.93	11-13S72883	11/17/23	Valley Tech
7	11.1	8.70	9.40	647.00	0.97	3.22	11-13S72883	11/17/23	Valley Tech
8	-	-	-	-	-	-			Valley Tech
9 (Trees)	-	-	-	-	-	-			-
1 (Trees)	-	-	-	-	-	-			-
2 (Trees)	-	-	-	-	-	-			-
10	2.2	3.90	7.80	89.00	0.96	0.84	11-13S72883	11/17/23	Valley Tech

Detectable Limits						
Valley Tech	*0.1*	*0.1*				
DellaValle	*0.1*	*0.1*	*1.1*	*0.2*	*0.0015*	*0.0001%*

Soil Analysis (Summer)

Fields:	0/1ft. NO3-N (mg/kg)	1/2 ft. NO3-N (mg/kg)	0/1 ft. Sol. P (mg/kg)	0/1 ft. K (mg/kg)	0/1 ft. EC (ds/m)	OM %	Lab #	Date	Source
3 (Trees)	-	-	-	-	-	-			-
4 (Trees)	-	-	-	-	-	-			-
5	-	-	-	-	-	-			-
6	-	-	-	-	-	-			-
7	-	-	-	-	-	-			-
8	-	-	-	-	-	-			-
9 (Trees)	-	-	-	-	-	-			-
1 (Trees)	-	-	-	-	-	-			-
2 (Trees)	-	-	-	-	-	-			-
10	-	-	-	-	-	-			-

Detectable Limits

Valley Tech	*0.1*	*0.1*				
DellaValle	*0.1*	*0.1*	*1.1*	*0.2*	*0.0015*	*0.0001%*

Nutrient Import & Export

Nutrient Export-Did you sell, give away or otherwise remove slurry, process water or dry manure from your property?

___ No

X Yes, Manifest attached (Attachment D)

Total Dry Manure Exported: 11,562

Nutrient Import

No Dry manure nutient imports entered

No Process wastewater nutrient imports entered

Total Process Water Exported:

No Commerical or other nutrient imports entered

Field Name	Type of Manure Applied	As Is / Dry Weight	Source

Process Water & Manure Analysis

Process Water															
Quarters:	NH4N (mg/L)	TKN (mg/L)	TP (mg/L)	TK (mg/L)	NO3N (mg/L)	NH3N (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	CO3 (mg/L)	HCO3 (mg/L)	SO4 (mg/L)	CL (mg/L)	EC (ds/m)	TDS (mg/L)
1	162.0	1,210.0	178.0	653.0	1.0	-	-	-	-	-	-	-	-	5	3,140
2	302.0	408.0	74.9	552.0	1.0	-	-	-	-	-	-	-	-	6	3,980
3	297.0	309.0	47.1	473.0	1.0	-	0.0	67.2	158.0	0.0	39.9	106.0	10.2	7	4,360
4	221.0	296.0	62.5	418.0	1.0	-	-	-	-	-	-	-	-	-	3,510
Detectable Limits															
Valley Tech	2.0	5.0	0.1	0.2										0.10	10
Dellavalle	0.2	0.7	0.02	0.2	0.01		0.05	0.4	0.10	0.9	3	0.01	0.03	0.001	10

				Inorg N	Org N	P2O5	K2O
Qtr	Sample #:	Sample Date:	Source	lbs / Ac In			
1	3-9L44127	3/9/2023	Valley Tech	36.9	237.5	92.5	178.3
2	5-12L49736	5/12/2023	Valley Tech	68.7	24.0	38.9	150.7
3	8-15L61712	8/15/2023	Valley Tech	67.5	2.7	24.5	129.1
4	10-2L67662	10/16/2023	Valley Tech	50.3	17.0	32.5	114.1

Description	Sample #:	Date:	As Is/ Dry Weight	Source	Material Type
Manure	5-12M49739	5/12/2023	Dry Weight	Valley Tech	Corral Solids
Manure	10-2M67655	10/13/2023	Dry Weight	Valley Tech	Corral Solids

Dry Manure: (As Recv'd)	TN %	TP %	TK %	Ca	Mg	Na	S	CL	Salt	TFS	Moisture %
Corral	1.17	0.51	1.07	-	-	-	-	-	-	-	38.00
Corral	0.72	0.23	0.87	1.50	0.35	0.19	0.45	0.46	-	57.70	43.40
Detectable Limits											
Valley Tech	0.01%	0.02%	0.02%								
Dellavalle	0.01%	0.01%	0.003%	0.001%	0.001%	0.001%	0.001%	0.000%		0.001%	0.001%

Nutrient Applications

Field Name/Number: **3 (Trees)** **Acres:** **58.00**

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/22	**W. Planting**	-	-	-	-	-	-	-	-	-	-		-
3/4/23	**6.00**	-	-	-	1.82	-	2.3	-	-	148	-		-
4/11/23	**6.00**	-	-	-	2.98	-	3.8	-	-	243	-		-
5/2/23	**6.00**	-	-	-	6.51	-	8.3	-	-	532	-		-
6/5/23	**6.00**	-	-	-	6.82	-	8.7	-	-	557	-		-
7/9/23	**6.00**	-	-	-	7.20	-	9.1	-	-	588	-		-
8/1/23	**6.00**	-	-	-	6.27	-	8.0	-	-	512	-		-
9/15/23	**6.00**	-	-	-	4.73	-	6.0	-	-	386	-		-
10/6/23	**6.00**	-	-	-	2.95	-	3.7	-	-	241	-		-
11/1/23	**W. Harvest**	-	-	-	-	-	(227.5)	(87.5)	(297.5)	-	-		1.75
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		**0.0**		**0**	**39.29**	**0.00**	**(178)**	**(88)**	**(298)**	**3,207**	**0.00**	**0**	**1.75**

Dry Weight
As Received

Field Name/Number: 3 (Trees) **Acres:** 58

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	49.9	0.0	0.0	3207.1
Nutrients Removed at Harvest	-227.5	-87.5	-297.5	0.0
Nutrient Balance	-177.6	-87.5	-297.5	3207.1

Winter Nitrogen Crop App / Use Ratio: 0.25 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: 3 (Trees) **Acres:** 58

Winter Crop **Trees, Almonds**

Nutrient Summary :		Applied		N		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		39.29	Ac In /Ac	49.9		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/22					
W. Harvest	11/1/23	1.8	T/Ac	(227.5)	(200.4)	(357.0)

Summer Crop **Trees, Almonds**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	0		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: 4 (Trees) **Acres:** 58.00

							Lab Sample Data					Yield	
Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
3/10/23	6.00	-	-	-	1.82	-	2.3	-	-	148	-		-
4/21/23	6.00	-	-	-	2.98	-	3.8	-	-	243	-		-
5/12/23	6.00	-	-	-	6.51	-	8.3	-	-	532	-		-
6/16/23	6.00	-	-	-	6.82	-	8.7	-	-	557	-		-
7/19/23	6.00	-	-	-	7.20	-	9.1	-	-	588	-		-
8/12/23	6.00	-	-	-	6.31	-	8.0	-	-	515	-		-
9/26/23	6.00	-	-	-	4.73	-	6.0	-	-	386	-		-
10/17/23	6.00	-	-	-	2.95	-	3.7	-	-	241	-		-
11/1/23	W. Harvest	-	-	-	-	-	(227.5)	(87.5)	(297.5)	-	-		1.75
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		0.0		0	39.32	0.00	(178)	(88)	(298)	3,210	0.00	0	1.75

Field Name/Number: 4 (Trees) **Acres:** 58.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	49.9	0.0	0.0	3209.9
Nutrients Removed at Harvest	-227.5	-38.2	-247.0	0.0
Nutrient Balance	-177.6	-38.2	-247.0	3209.9

Winter Nitrogen Crop App / Use Ratio: 0.25 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: 4 (Trees) **Acres:** 58

Winter Crop **Trees, Almonds**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		39.3	Ac In /Ac	49.9		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/22					
W. Harvest	11/1/23	1.8	T/Ac	(227.5)	(200.4)	(357.0)

Summer Crop **Trees, Almonds**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: 5 **Acres:** 112.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
10/15/22	W. Manure App.	5.36	-	-	-	-	50.0	54.5	114.3	-	-		-
10/25/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
10/27/22	2.00	-	-	-	6.35	-	7.8	-	-	389	-		-
12/8/22	2.00	-	-	-	5.25	-	6.4	-	-	321	-		-
12/8/22	Process Water	-	-	-	-	1.93	125.5	78.0	286.2	1,376	-		-
3/25/23	2.00	-	-	-	6.45	-	7.9	-	-	395	-		-
4/18/23	W. Harvest	-	-	-	-	-	(175.2)	(27.5)	(145.9)	-	-		16.05
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/21/23	S. Comm Fert App.	-	-	120	-	-	120.0	-	-	-	-		-
4/26/23	2.00	-	-	-	6.48	-	7.9	-	-	397	-		-
5/15/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/5/23	2.00	-	-	-	6.37	-	7.8	-	-	390	-		-
6/21/23	7.00	-	-	-	6.07	-	15.1	-	-	751	-		-
7/12/23	2.00	-	-	-	6.20	-	7.6	-	-	380	-		-
8/5/23	2.00	-	-	-	6.58	-	8.1	-	-	403	-		-
8/28/23	S. Harvest	-	-	-	-	-	(247.2)	(39.7)	(228.7)	-	-		23.28
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		**5.4**		**120**	**49.75**	**1.93**	**(58)**	**65**	**26**	**4,801**	**0.00**	**0**	**39.33**

Field Name/Number: 5 **Acres:** 112.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	364.0	57.8	332.4	4801.5
Nutrients Removed at Harvest	-422.5	-29.3	-310.9	0.0
Nutrient Balance	-58.4	28.5	21.4	4801.5

Winter Nitrogen Crop App / Use Ratio: 1.17 **Summer Nitrogen Crop App / Use Ratio:** 1.19

Field Name/Number: 5 **Acres:** 112

Winter Crop **Wheat, Silage**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		5.4	T/Ac	50.0	124.7	137.1
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	1.9	Ac In /Ac	125.5	178.6	343.4
	Q2	-	Ac In /Ac	-	-	-
Well Water		18.0	Ac In /Ac	22.1		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	10/25/22					
W. Harvest	4/18/23	16.1	T/Ac	(175.2)	(62.9)	(175.0)

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		120.0	lbs/Ac	120.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		31.7	Ac In /Ac	166.5		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	5/15/23					
S. Harvest	8/28/23	23.3	T/Ac	(247.2)	(90.8)	(274.5)

Nutrient Applications

Field Name/Number: 6 **Acres:** 110.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
11/1/22	W. Manure App.	10.00	-	-	-	-	93.2	101.7	213.3	-	-		-
11/16/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
11/22/22	3.00	-	-	-	6.17	-	10.3	-	-	411	-		-
2/3/23	3.00	-	-	-	5.11	-	8.6	-	-	341	-		-
2/3/23	Process Water	-	-	-	-	2.05	100.6	82.5	302.8	1,456	-		-
4/8/23	3.00	-	-	-	6.33	-	10.6	-	-	422	-		-
5/7/23	3.00	-	-	-	6.24	-	10.5	-	-	416	-		-
5/24/23	W. Harvest	-	-	-	-	-	(205.2)	(40.0)	(255.9)	-	-		19.43
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
8/31/23	S. Comm Fert App.	-	-	100	-	-	100.0	-	-	-	-		-
6/17/23	4.00	-	-	-	6.49	-	9.1	-	-	291	-		-
7/7/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
7/29/23	4.00	-	-	-	6.43	-	9.0	-	-	289	-		-
8/31/23	4.00	-	-	-	6.58	-	9.3	-	-	296	-		-
9/17/23	4.00	-	-	-	6.33	-	8.9	-	-	284	-		-
10/1/23	4.00	-	-	-	6.53	-	9.2	-	-	293	-		-
10/15/23	S. Harvest	-	-	-	-	-	(200.2)	(40.9)	(148.0)	-	-		26.20
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		**10.0**		**100**	**56.21**	**2.05**	**(26)**	**103**	**112**	**4,499**	**0.00**	**0**	**45.63**

Field Name/Number: 6 **Acres:** 110.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	379.4	80.4	428.4	4498.9
Nutrients Removed at Harvest	-405.4	-35.3	-335.3	0.0
Nutrient Balance	-26.0	45.1	93.1	4498.9

Winter Nitrogen Crop App / Use Ratio: 1.17 **Summer Nitrogen Crop App / Use Ratio:** 1.26

Field Name/Number: 6 **Acres:** 110

Winter Crop **Wheat, Silage**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		10.0	T/Ac	93.2	232.8	255.9
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	2.0	Ac In /Ac	100.6	189.0	363.4
	Q2	-	Ac In /Ac	-	-	-
Well Water		23.8	Ac In /Ac	40.0		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	11/16/22					
W. Harvest	5/24/23	19.4	T/Ac	(205.2)	(91.6)	(307.1)

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		100.0	lbs/Ac	100.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		32.4	Ac In /Ac	145.5		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	7/7/23					
S. Harvest	10/15/23	26.2	T/Ac	(200.2)	(93.6)	(177.6)

Nutrient Applications

Field Name/Number: 7 **Acres:** 37.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
10/25/22	W. Manure App.	13.51	-	-	-	-	126.0	137.4	288.2	-	-		-
11/2/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
11/3/22	4.00	-	-	-	6.69	-	9.4	-	-	301	-		-
12/23/22	4.00	-	-	-	5.22	-	7.3	-	-	234	-		-
12/23/22	Process Water	-	-	-	-	1.92	124.8	77.6	284.6	1,369	-		-
4/15/23	4.00	-	-	-	6.35	-	8.9	-	-	285	-		-
5/11/23	W. Harvest	-	-	-	-	-	(302.9)	(70.1)	(502.8)	-	-		22.59
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/23/23	S. Comm Fert App.	-	-	100	-	-	100.0	-	-	-	-		-
5/14/23	4.00	-	-	-	6.24	-	8.8	-	-	280	-		-
5/28/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/3/23	4.00	-	-	-	6.81	-	9.6	-	-	306	-		-
6/23/23	4.00	-	-	-	6.52	-	9.2	-	-	293	-		-
7/12/23	4.00	-	-	-	6.41	-	9.0	-	-	288	-		-
8/18/23	4.00	-	-	-	6.64	-	9.3	-	-	298	-		-
9/9/23	S. Harvest	-	-	-	-	-	(208.1)	(50.5)	(220.3)	-	-		25.51
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		**13.5**		**100**	**50.88**	**1.92**	**(89)**	**94**	**(150)**	**3,653**	**0.00**	**0**	**48.11**

Field Name/Number: 7 **Acres:** 37.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	422.3	93.8	475.5	3653.2
Nutrients Removed at Harvest	-511.0	-52.6	-600.2	0.0
Nutrient Balance	-88.7	41.2	-124.7	3653.2

Winter Nitrogen Crop App / Use Ratio: 0.94 **Summer Nitrogen Crop App / Use Ratio:** 1.21

Field Name/Number: 7 **Acres:** 37

Winter Crop **Wheat, Silage**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		13.5	T/Ac	126.0	314.7	345.9
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	1.9	Ac In /Ac	124.8	177.7	341.5
	Q2	-	Ac In /Ac	-	-	-
Well Water		18.3	Ac In /Ac	25.7		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	11/2/22					
W. Harvest	5/11/23	22.6	T/Ac	(302.9)	(160.4)	(603.4)

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		100.0	lbs/Ac	100.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		32.6	Ac In /Ac	145.8		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	5/28/23					
S. Harvest	9/9/23	25.5	T/Ac	(208.1)	(115.7)	(264.3)

Nutrient Applications

Field Name/Number: 8 **Acres:** 75.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
4/7/23	W. Comm Fert App.	-	-	80	-	-	80.0	-	-	-	-		-
11/3/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
11/4/22	7.00	-	-	-	6.67	-	16.6	-	-	826	-		-
11/22/22	2.00	-	-	-	6.13	-	7.5	-	-	375	-		-
2/15/23	7.00	-	-	-	4.95	-	12.3	-	-	613	-		-
2/15/23	Process Water	-	-	-	-	2.31	113.6	93.2	341.9	1,644	-		-
4/7/23	7.00	-	-	-	6.47	-	16.1	-	-	801	-		-
5/11/23	W. Harvest	-	-	-	-	-	(282.0)	(62.4)	(439.2)	-	-		25.39
	-	-	-	-	-	-	-	-	-	-	-		-
7/17/23	S. Comm Fert App.	-	-	120	-	-	120.0	-	-	-	-		-
5/24/23	6.00	-	-	-	6.44	-	8.2	-	-	526	-		-
6/8/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/17/23	6.00	-	-	-	6.28	-	8.0	-	-	513	-		-
7/17/23	6.00	-	-	-	6.55	-	8.3	-	-	535	-		-
8/21/23	6.00	-	-	-	6.34	-	8.0	-	-	517	-		-
9/10/23	6.00	-	-	-	6.39	-	8.1	-	-	522	-		-
9/26/23	S. Harvest	-	-	-	-	-	(253.5)	(39.6)	(228.2)	-	-		24.08
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		**0.0**		**200**	**56.22**	**2.31**	**(129)**	**(9)**	**(325)**	**6,872**	**0.00**	**0**	**49.47**

Field Name/Number: 8 **Acres:** 75.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	406.8	40.7	283.8	6871.6
Nutrients Removed at Harvest	-535.5	-44.5	-554.0	0.0
Nutrient Balance	-128.7	-3.9	-270.2	6871.6

Winter Nitrogen Crop App / Use Ratio: 1.18 **Summer Nitrogen Crop App / Use Ratio:** 1.13

Field Name/Number: 8 **Acres:** 75

Winter Crop **Wheat, Silage**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		80.0	lbs/Ac	80.0		
Process Water	Q1	2.3	Ac In /Ac	113.6	213.4	410.2
	Q2	-	Ac In /Ac	-	-	-
Well Water		24.2	Ac In /Ac	132.6		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	11/3/22					
W. Harvest	5/11/23	25.4	T/Ac	(282.0)	(143.0)	(527.0)

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		120.0	lbs/Ac	120.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		32.0	Ac In /Ac	160.6		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	6/8/23					
S. Harvest	9/26/23	24.1	T/Ac	(253.5)	(90.7)	(273.8)

Nutrient Applications

Field Name/Number: 9 (Trees) **Acres:** 7.50

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Yield Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/18	W. Planting	-	-	-	-	-	-	-	-	-	-		-
3/4/23	3.00	-	-	-	1.80	-	3.0	-	-	120	-		-
4/11/23	3.00	-	-	-	2.84	-	4.8	-	-	189	-		-
5/2/23	3.00	-	-	-	6.19	-	10.4	-	-	412	-		-
6/5/23	3.00	-	-	-	6.44	-	10.8	-	-	430	-		-
7/9/23	3.00	-	-	-	6.96	-	11.7	-	-	464	-		-
8/1/23	3.00	-	-	-	5.93	-	9.9	-	-	395	-		-
9/15/23	3.00	-	-	-	4.64	-	7.8	-	-	309	-		-
10/6/23	3.00	-	-	-	2.84	-	4.8	-	-	189	-		-
11/1/23	W. Harvest	-	-	-	-	-	(227.5)	(87.5)	(297.5)	-	-		1.75
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		0.0		0	37.63	0.00	(164)	(88)	(298)	2,509	0.00	0	1.75

Field Name/Number: 9 (Trees) **Acres:** 7.50

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	63.1	0.0	0.0	2508.7
Nutrients Removed at Harvest	-227.5	-38.2	-247.0	0.0
Nutrient Balance	-164.4	-38.2	-247.0	2508.7

Winter Nitrogen Crop App / Use Ratio: 0.31 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: 9 (Trees) **Acres:** 7.5

Winter Crop **Trees, Almonds**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		37.6	Ac In /Ac	63.1		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/18					
W. Harvest	11/1/23	1.8	T/Ac	(227.5)	(200.4)	(357.0)

Summer Crop **Trees, Almonds**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: **1 (Trees)** **Acres:** **67.00**

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/18	W. Planting	-	-	-	-	-	-	-	-	-	-		-
3/4/23	2.00	-	-	-	1.82	-	2.2	-	-	111	-		-
4/11/23	2.00	-	-	-	2.98	-	3.6	-	-	182	-		-
5/2/23	2.00	-	-	-	6.55	-	8.0	-	-	401	-		-
6/5/23	2.00	-	-	-	6.83	-	8.4	-	-	418	-		-
7/9/23	2.00	-	-	-	7.20	-	8.8	-	-	441	-		-
8/1/23	2.00	-	-	-	6.27	-	7.7	-	-	384	-		-
9/15/23	2.00	-	-	-	4.70	-	5.8	-	-	288	-		-
10/6/23	2.00	-	-	-	2.94	-	3.6	-	-	180	-		-
11/1/23	W. Harvest	-	-	-	-	-	(227.5)	(87.5)	(297.5)	-	-		1.75
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		0.0		0	39.28	0.00	(179)	(88)	(298)	2,405	0.00	0	1.75

Field Name/Number: 1 (Trees) **Acres:** 67.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	48.1	0.0	0.0	2405.0
Nutrients Removed at Harvest	-227.5	-38.2	-247.0	0.0
Nutrient Balance	-179.4	-38.2	-247.0	2405.0

Winter Nitrogen Crop App / Use Ratio: 0.24 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: 1 (Trees) **Acres:** 67

Winter Crop	**Trees, Almonds**					
Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		39.3	Ac In /Ac	48.1		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/18					
W. Harvest	11/1/23	1.8	T/Ac	(227.5)	(200.4)	(357.0)

Summer Crop	**Trees, Almonds**					
Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: 2 (Trees) **Acres:** 40.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Yield Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/18	W. Planting	-	-	-	-	-	-	-	-	-	-		-
3/4/23	8.00	-	-	-	1.84	-	0.2	-	-	282	-		-
4/11/23	8.00	-	-	-	2.99	-	0.3	-	-	460	-		-
5/2/23	8.00	-	-	-	6.56	-	0.7	-	-	1,008	-		-
6/5/23	8.00	-	-	-	6.82	-	0.8	-	-	1,049	-		-
7/9/23	8.00	-	-	-	7.24	-	0.8	-	-	1,113	-		-
8/1/23	8.00	-	-	-	6.30	-	0.7	-	-	968	-		-
9/15/23	8.00	-	-	-	4.72	-	0.5	-	-	726	-		-
10/6/23	8.00	-	-	-	2.94	-	0.3	-	-	452	-		-
11/1/23	W. Harvest	-	-	-	-	-	(227.5)	(87.5)	(297.5)	-	-		1.75
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		0.0		0	39.41	0.00	#N/A	-	-	#N/A	0.00	0	1.75

Field Name/Number: 2 (Trees) **Acres:** 40.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	4.5	0.0	0.0	6058.2
Nutrients Removed at Harvest	-227.5	-38.2	-247.0	0.0
Nutrient Balance	-223.0	-38.2	-247.0	6058.2

Winter Nitrogen Crop App / Use Ratio: 0.05 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: 2 (Trees) **Acres:** 40

Winter Crop **Trees, Almonds**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		39.4	Ac In /Ac	4.5		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/18					
W. Harvest	11/1/23	1.8	T/Ac	(227.5)	(200.4)	(357.0)

Summer Crop **Trees, Almonds**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: 10 **Acres:** 38.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
2/13/23	W. Comm Fert App.	-	-	100	-	-	100.0	-	-	-	-		-
11/3/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
11/9/22	3.00	-	-	-	6.46	-	10.8	-	-	431	-		-
2/13/23	3.00	-	-	-	6.26	-	10.5	-	-	417	-		-
4/8/23	2.00	-	-	-	5.25	-	6.4	-	-	321	-		-
4/8/23	Process Water	-	-	-	-	1.93	95.1	32.8	241.9	1,744	-		-
5/1/23	2.00	-	-	-	6.68	-	8.2	-	-	409	-		-
5/11/23	W. Harvest	-	-	-	-	-	(337.9)	(72.3)	(535.2)	-	-		20.26
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
7/12/23	S. Comm Fert App.	-	-	100	-	-	100.0	-	-	-	-		-
5/17/23	7.00	-	-	-	6.63	-	16.5	-	-	821	-		-
6/2/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/13/23	7.00	-	-	-	6.50	-	16.2	-	-	804	-		-
7/12/23	7.00	-	-	-	6.28	-	15.7	-	-	777	-		-
8/12/23	7.00	-	-	-	6.58	-	16.4	-	-	815	-		-
9/4/23	7.00	-	-	-	6.37	-	15.9	-	-	788	-		-
9/26/23	S. Harvest	-	-	-	-	-	(233.7)	(41.3)	(205.1)	-	-		25.32
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		**0.0**		**200**	**57.00**	**1.93**	**(160)**	**(81)**	**(498)**	**7,328**	**0.00**	**0**	**45.58**

Field Name/Number: 10 **Acres:** 38.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	411.7	14.3	200.8	7328.3
Nutrients Removed at Harvest	-571.6	-49.6	-614.5	0.0
Nutrient Balance	-159.9	-35.3	-413.7	7328.3

Winter Nitrogen Crop App / Use Ratio: 1.00 **Summer Nitrogen Crop App / Use Ratio:** 1.23

Field Name/Number: 10 **Acres:** 38

Winter Crop **Wheat, Silage**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		100.0	lbs/Ac	100.0		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	1.9	Ac In /Ac	95.1	75.2	290.3
Well Water		24.6	Ac In /Ac	135.9		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	11/3/22					
W. Harvest	5/11/23	20.3	T/Ac	(337.9)	(165.5)	(642.3)

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		100.0	lbs/Ac	100.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		32.4	Ac In /Ac	180.7		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	6/2/23					
S. Harvest	9/26/23	25.3	T/Ac	(233.7)	(94.7)	(246.1)

Notes

Without allowance for the significant amount of rainfall during the winter months of 2022/2023, the irrigation logs on each field page of the annual report, reflect canal and/or well used only during that time frame. The facility did not irrigate during the "Significant Storm Events".

It is inaccurate to present "salt" application without acknowledging that there is substantial uptake and utilization of "salts" by crops. If it is possible to calculate "salt" application, it is also possible to calculate "salt" utilization. That calculation should be included in this report. To calculate "salt" utilization is a lengthy process and cannot be done with the constituents required in the Revised General Order sampling requirements.

The signature(s) affixed to this report does not affirmatively refer to those references to "salt" that we know to be incorrect.

P. T. C *(Initial)*

Exception Reporting

Manure , Process Water and Other Dairy Waste Discharges:

The following is a summary of all manure and process water discharges from the production area to surface water or to land areas (land application areas or otherwise) when not in accordance with the facility's Nutrient Management Plan.

No, manure or process water discharges occurred during the reporting period

Storm Water Discharges:

The follow is a summary of all storm water discharges from the production area to surface water during the reporting period when not in accordance with the facility's Nutrient Management Plan.

No, storm water discharges occurred durging the reporting period

Land Application Area To Surface Water Discharges:

The following is a summary of all discharges from the land application area surface water that have occurred during the reporting period when not in accordance with the facility's Nutrient

No, land application area to surface water discharges occurred during the reporting period

Nutrient Management Plan (NMP) & Written Agreement Statement

Nutrient Management Plan Statement:

Was the faciltiy NMP updated in the reporting period? No

Was the facility's NMP developed and approved by a certified nutrient management specialist? No

Written Agreements:

Are there any written agreements with third parties to receive manure or process water that are new or were revised within the repoting period? No

Owner and/or Operator Certification

**I certify under penalty of law that all information submitted as part of this document is accurate and true. Certification signatures by a California Registered Professional have been supplied as needed in Part II. I have personally examined and am familiar with the information submitted in Parts I and II of this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

Perry Tjaarda

Signature of Owner of Facility

Signature of Operator of Facility

Perry Tjaarda Perry Tjaarda

Print Name

Same as owner

Print Name

4-10-24

Date

Date

Livingston Dairy Consulting, Inc.

FIELD ACTIVITY REPORT

Facility Name: Tjaarda Dairy
19211 Magnolia Avenue, Shafter
Kern County

2023

Sample Collection Equipment:
Bottle Container

Sample Container: (Circle one)
Bottle Container: 8 fl oz 16 fl oz 32 fl oz

Sample Collection Location: (Circle one)
Discharge Pipe Spigot/Faucet

Sample Collection Method: (Circle one) *All Samples are labeled with the facility name, date, contents, location and description ** Please see the Sample and Anylsis Plan for more detailed descriptions.

Well: **Sample taken at the Discharge Pipe, Spigot or Faucet using a sample container provided by laboratory**

Sample Type:

Date	Well Name	Time	PH	Temp	Ammonium
2/10	Barn 1	7:20	6.5	68	Ø
4/26	Well #3	7:03	6	64	Ø
	#7	7:09	7	66	Ø
	#8	7:15	7	66	Ø
	#2	7:21	6.5	68	Ø
7/11	Well #4	6:44	6	67	Ø
	#6	6:51	7	65	Ø

Sample Preservation Method: (Circle one) **Ice Chest Refrigerator Ice Pack**

Tiarda

FGL ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

May 15, 2023

Lab No. : **VI 2342521**
Customer No. : **4018505**

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Laboratory Report

Introduction: This report package contains a total of 6 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(4 pages)	: Results for each sample submitted.
Quality Control	(1 page)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
Well #3	04/26/2023	04/26/2023	VI 2342521-001	AGW
Well #7	04/26/2023	04/26/2023	VI 2342521-002	AGW
Well #8	04/26/2023	04/26/2023	VI 2342521-003	AGW
Well #2	04/26/2023	04/26/2023	VI 2342521-004	AGW

Sampling and Receipt Information:

All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples were received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

Test Summary

EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

Certification: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: JRD

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S. Title: Laboratory Director Date: 2023-05-17

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

May 15, 2023

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Description : Well #3
Project : W-6 Tjaarda Dairy

Lab No. : VI 2342521-001
Customer No. : 4018505

Sampled On : April 26, 2023 at 07:03
Sampled By : Marlene Ferreira
Received On : April 26, 2023 at 13:18
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	05/10/2023	13:10	sta	EPA 351.2	05/11/2023	11:37	lcr
Nitrate Nitrogen	7.4	0.4	mg/L		1		04/27/2023	14:00	lfs	SM 4500-NO3 F	04/27/2023	17:28	lfs
Nitrogen, Total as Nitrogen	7.4	0.5	mg/L		1		05/10/2023	13:10	sta	Calc.	05/11/2023	11:37	lcr
Nitrate + Nitrite as N	7.4	0.4	mg/L		1		04/27/2023	14:00	lfs	SM 4500-NO3 F	04/27/2023	17:28	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	05/10/2023	13:10	sta	EPA 351.2	05/11/2023	11:37	lcr
Conductivity	814	1	umhos/cm		1		05/09/2023	18:02	amm	SM 4500-H+B	05/09/2023	22:34	amm
Solids, Total Dissolved (TDS)	490	20	mg/L		1		04/28/2023	10:05	ctl	SM 2540 C	05/01/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

May 15, 2023

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Description : Well #7
Project : W-6 Tjaarda Dairy

Lab No. : VI 2342521-002
Customer No. : 4018505

Sampled On : April 26, 2023 at 07:09
Sampled By : Marlene Ferreira
Received On : April 26, 2023 at 13:18
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	05/10/2023	13:10	sta	EPA 351.2	05/11/2023	11:39	lcr
Nitrate Nitrogen	11.0	0.4	mg/L		1		04/27/2023	14:00	lfs	SM 4500-NO3 F	04/27/2023	17:30	lfs
Nitrogen, Total as Nitrogen	11.0	0.5	mg/L		1		05/10/2023	13:10	sta	Calc.	05/11/2023	11:39	lcr
Nitrate + Nitrite as N	11.0	0.4	mg/L		1		04/27/2023	14:00	lfs	SM 4500-NO3 F	04/27/2023	17:30	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	05/10/2023	13:10	sta	EPA 351.2	05/11/2023	11:39	lcr
Conductivity	1340	1	umhos/cm		1		05/09/2023	18:02	amm	SM 4500-H+B	05/09/2023	22:28	amm
Solids, Total Dissolved (TDS)	910	20	mg/L		1		04/28/2023	10:05	ctl	SM 2540 C	05/01/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

May 15, 2023

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Description : Well #8
Project : W-6 Tjaarda Dairy

Lab No. : VI 2342521-003
Customer No. : 4018505

Sampled On : April 26, 2023 at 07:15
Sampled By : Marlene Ferreira
Received On : April 26, 2023 at 13:18
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	05/10/2023	13:10	sta	EPA 351.2	05/11/2023	11:41	lcr
Nitrate Nitrogen	0.5	0.4	mg/L		1		04/27/2023	14:00	lfs	SM 4500-NO3 F	04/27/2023	17:33	lfs
Nitrogen, Total as Nitrogen	0.5	0.5	mg/L		1	U	05/10/2023	13:10	sta	Calc.	05/11/2023	11:41	lcr
Nitrate + Nitrite as N	0.5	0.4	mg/L		1		04/27/2023	14:00	lfs	SM 4500-NO3 F	04/27/2023	17:33	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	05/10/2023	13:10	sta	EPA 351.2	05/11/2023	11:41	lcr
Conductivity	1860	1	umhos/cm		1		05/09/2023	18:02	amm	SM 4500-H+B	05/09/2023	22:31	amm
Solids, Total Dissolved (TDS)	1130	20	mg/L		1		04/28/2023	10:05	ctl	SM 2540 C	05/01/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

May 15, 2023

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Description : Well #2
Project : W-6 Tjaarda Dairy

Lab No. : VI 2342521-004
Customer No. : 4018505

Sampled On : April 26, 2023 at 07:21
Sampled By : Marlene Ferreira
Received On : April 26, 2023 at 13:18
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	05/10/2023	13:10	sta	EPA 351.2	05/11/2023	11:44	lcr
Nitrate Nitrogen	5.4	0.4	mg/L		1		04/27/2023	14:00	lfs	SM 4500-NO3 F	04/27/2023	17:35	lfs
Nitrogen, Total as Nitrogen	5.4	0.5	mg/L		1		05/10/2023	13:10	sta	Calc.	05/11/2023	11:44	lcr
Nitrate + Nitrite as N	5.4	0.4	mg/L		1		04/27/2023	14:00	lfs	SM 4500-NO3 F	04/27/2023	17:35	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	05/10/2023	13:10	sta	EPA 351.2	05/11/2023	11:44	lcr
Conductivity	748	1	umhos/cm		1		05/09/2023	18:02	amm	SM 4500-H+B	05/09/2023	23:34	amm
Solids, Total Dissolved (TDS)	450	20	mg/L		1		04/28/2023	10:05	ctl	SM 2540 C	05/01/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

May 15, 2023

Livingston Dairy Consulting, Inc.

Lab No. : VI 2342521
Customer No. : 4018505

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2342609-002)	Dup	umhos/cm		0.2%	5	
		(VI 2342549-001)	Dup	umhos/cm		0.1%	5	
Solids, Total Dissolved	2540CE	04/28/2023:204582CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	993.7	98.9%	90-110	
		(STK2335060-004)	Dup	mg/L		0.4%	5	
		(STK2335060-004)	Dup	mg/L		0.8%	5	
			Blank	mg/L		ND	<20	
			LCS	mg/L	993.7	96.5%	90-110	
		(SP 2306442-002)	Dup	mg/L		0.9%	5	
		(SP 2306442-002)	Dup	mg/L		1.27%	5	
Nitrogen, Total Kjeldahl	351.2	05/10/2023:205052STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	91.9%	73-124	
			MS	mg/L	12.00	86.2%	54-136	
		(CH 2372746-001)	MSD	mg/L	12.00	87.8%	54-136	
			MSRPD	mg/L	12.00	1.8%	≤27	
			MS	mg/L	12.00	87.9%	54-136	
		(CH 2372746-002)	MSD	mg/L	12.00	84.7%	54-136	
			MSRPD	mg/L	12.00	3.6%	≤27	
Nitrate + Nitrite as N	4500NO3F	04/27/2023:204546LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	99.2%	80-120	
			MS	mg/L	5.609	90.0%	66-125	
		(SP 2306458-001)	MSD	mg/L	5.609	93.0%	66-125	
			MSRPD	mg/L	5.609	1.4%	≤30.4	
Nitrate Nitrogen	4500NO3F	04/27/2023:204546LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	99.2%	80-120	
			MS	mg/L	5.609	90.0%	66-125	
		(SP 2306458-001)	MSD	mg/L	5.609	93.0%	66-125	
			MSRPD	mg/L	5.609	1.4%	≤30.4	

Definition

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

ND : Non-detect - Result was below the DQO listed for the analyte.

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

FGL ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

Special

CHAIN OF CUSTODY
www.fglinc.com

Laboratory Copy (1 of 2)

42086:04/01/2023

Client: **Livingston Dairy Consulting, Inc.**
Address: Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Phone: (559)687-1440 Fax:
Contact Person: Noreen Livingston
Project Name: **W-6** Tjaarda Dairy
Purchase Order Number:
Quote Number: **VI 20210208-01**

Sampler(s) Marlene

Sampling Fee: _____ Pickup Fee: _____
Compositor Setup Date: ___/___/___ Time: ___/___

Lab Number: **VI** 2342521 **4-18505**

Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL.)	Dairy Analysis-W-6-Conductivity,NO3-N,Total N,TDS 16oz(P)	Bottles/Containers Split Fee 8oz(P)-H2SO4
1	Well #3	4/26	7:03AM	G	AgW	NP			1	1
2	Well #7		7:09AM	G					1	1
3	Well #8		7:15AM	G					1	1
4	Well #2		7:21AM	G					1	1
5				G					1	1
6				G					1	1
7				G					1	1
8				G					1	1
9				G					1	1
10				G					1	1

TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information

Remarks:

Relinquished	Date:	Time:
Marlene	4/26/23	13:18
SRO	4.26.23	~~17:30~~ 1730
GLS	4/27/23	1313

Received By:	Date:	Time:
SRO	4.26.23	1318
GLS	4.26.23	~~1730~~ SRO 1730
	4/27/23	1313

13.6°

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
Phone: (805) 392-2000
Env Fax: (805) 525-4172 / Ag Fax: (805) 392-2063

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
Phone: (209) 942-0182
Fax: (209) 942-0423

Office & Laboratory
563 E. Lindo
Chico, CA 95926
Phone: (530) 343-5818
Fax: (530) 343-3807

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
Phone: (805) 783-2940
Fax: (805) 783-2912

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
Phone: (559) 734-9473
Fax: (559) 734-8435

Inter-Laboratory Condition Upon Receipt (Attach to COC)

Sample Receipt at: STK CC CH (VI)

1. Number of ice chests/packages received: 1 Shipping tracking # OTC

2. Were samples received in a chilled condition? Temps: R01 / 13.6°C ____ / ____ / ____
   Surface water SWTR bact samples: A sample that has a temperature upon receipt of >10° C, whether iced or not, should be flagged unless the time since sample collection has been less than two hours.

3.	Do the number of bottles received agree with the COC?	(Yes)	No	N/A
4.	Were samples received intact? (i.e. no broken bottles, leaks etc.)	(Yes)	No	
5.	VOAs checked for Headspace?	Yes	No	(N/A)
6.	Were sample custody seals intact?	Yes	No	(N/A)
7.	If required, was sample split for pH analysis?	Yes	No	(N/A)
8.	Were all analyses within holding times at time of receipt?	(Yes)	No	
9.	Verify sample date, time and sampler name	(Yes)	No	

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.
Sample Receipt Review completed by (initials): SRO

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: 3 / 3 / 3 / ____ / ____
   Acceptable is above freezing to 6 C. If many packages are received at one time check for tests/H.T.'s/rushes/
2. Shipping tracking numbers: 775728114 4, 775728 6153, 775728 0321

3.	Do the number of bottles received agree with the COC?	(Yes)	No	N/A
4.	Were samples received intact? (i.e. no broken bottles, leaks etc.)	(Yes)	No	
5.	Were sample custody seals intact?	Yes	No	(N/A)

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

Sample Verification, Labeling and Distribution:

1.	Were all requested analyses understood and acceptable?	(Yes)	No		
2.	Did bottle labels correspond with the client's ID's?	(Yes)	No		
3.	Were all bottles requiring sample preservation properly preserved? [Exception: Oil & Grease, VOA and CrVI verified in lab]	(Yes)	No	N/A	FGL
4.	VOAs checked for Headspace?	Yes	No	(N/A)	
5.	Have rush or project due dates been checked and accepted?	Yes	No	(N/A)	
6.	Were all analyses within holding times at time of receipt?	(Yes)	No		

Attach labels to the containers and include a copy of the COC for lab delivery.
Sample Receipt, Login and Verification completed by (initials): CLL

Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted: _____ Phone Number: _____
   Initiated By: _____ Date: _____
   Problem:
   Resolution:

2. Person Contacted: _____ Phone Number: _____
   Initiated By: _____
   Problem:
   Resolution:

(Please use the back of this sheet for additio
contacts)

(4018505)
Livingston Dairy Consulting, Inc.
VI 2342521
mdc 04/26/2023 17:02:48
VI 2342521

inc

Tiaarda

ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

March 9, 2023

Lab No. : VI 2340878
Customer No. : 4018505

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Laboratory Report

Introduction: This report package contains a total of 3 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(1 page)	: Results for each sample submitted.
Quality Control	(1 page)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
Barn 1	02/10/2023	02/10/2023	VI 2340878-001	DW

Sampling and Receipt Information:

The Sample was received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. The Sample was received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

Test Summary

	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

Certification: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: JRD

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S. Title: Laboratory Director Date: 2023-03-09

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

March 9, 2023

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Description : Barn 1
Project : W-6 Tjaarda

Lab No. : VI 2340878-001
Customer No. : 4018505

Sampled On : February 10, 2023 at 07:20
Sampled By : KC / MF
Received On : February 10, 2023 at 10:39
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	02/24/2023	11:30	sta	EPA 351.2	03/01/2023	17:44	lcr
Nitrate Nitrogen	3.3	0.4	mg/L	10	1		02/22/2023	11:45	lfs	SM 4500-NO3 F	02/22/2023	13:19	lfs
Nitrogen, Total as Nitrogen	3.3	0.5	mg/L		1		02/24/2023	11:30	sta	EPA 351.2	03/01/2023	17:44	lcr
Nitrate + Nitrite as N	3.3	0.4	mg/L	10	1		02/22/2023	11:45	lfs	SM 4500-NO3 F	02/22/2023	13:19	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	02/24/2023	11:30	sta	EPA 351.2	03/01/2023	17:44	lcr
Conductivity	582	1	umhos/cm	1600[2]	1		02/21/2023	14:01	sta		02/21/2023	14:01	sta
Solids, Total Dissolved (TDS)	320	20	mg/L	1000[2]	1		02/14/2023	12:50	ctl	SM 2540 C	02/15/2023	12:38	ctl

DQF Flags Definition:
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution
MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

March 9, 2023

Livingston Dairy Consulting, Inc.

Lab No. : VI 2340878
Customer No. : 4018505

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2510B	02/21/2023:201893STA	Blank	umhos/cm		ND	<1	
		(VI 2341015-002)	Dup	umhos/cm		0.4%	5	
Solids, Total Dissolved	2540CE	02/14/2023:201630CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	990.8	98.4 %	90-110	
		(VI 2340882-003)	Dup	mg/L		1.4%	5	
		(VI 2340882-003)	Dup	mg/L		4.5%	5	
Nitrogen, Total Kjeldahl	351.2	02/24/2023:202049STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	91.2%	73-124	
			MS	mg/L	12.00	84.9%	54-136	
		(VI 2340880-001)	MSD	mg/L	12.00	83.6%	54-136	
			MSRPD	mg/L	12.00	1.5%	≤27	
			MS	mg/L	12.00	88.2%	54-136	
		(VI 2340880-002)	MSD	mg/L	12.00	89.0%	54-136	
			MSRPD	mg/L	12.00	0.8%	≤27	
Nitrate + Nitrite as N	4500NO3F	02/22/2023:201947LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	98.3%	80-120	
			MS	mg/L	5.609	97.3%	66-125	
		(SP 2302530-001)	MSD	mg/L	5.609	99.4%	66-125	
			MSRPD	mg/L	5.609	1.8%	≤30.4	
Nitrate Nitrogen	4500NO3F	02/22/2023:201947LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	98.3%	80-120	
			MS	mg/L	5.609	97.3%	66-125	
		(SP 2302530-001)	MSD	mg/L	5.609	99.4%	66-125	
			MSRPD	mg/L	5.609	1.8%	≤30.4	

Definition

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

ND : Non-detect - Result was below the DQO listed for the analyte.

Page 3 of 3

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

FGL ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

Special

CHAIN OF CUSTODY
www.fglinc.com

Laboratory Copy (1 of 3)

42086:03/01/2022

TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information

Client: **Livingston Dairy Consulting, Inc.**
Address: Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Phone: (559)687-1440 Fax:
Contact Person: Noreen Livingston
Project Name: W-6 Tjaarda
Purchase Order Number:
Quote Number: **VI 20210208-01**

Sampler(s) KL /MF

Sampling Fee: _____ Pickup Fee: _____
Compositor Setup Date: ___/___/___ Time: ___/___

Lab Number: **VI** 2340878 **4-18505**

Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)	Dairy Analysis-W-6-Conductivity,NO3-N,Total N,TDS 16oz(P)	Sampling-W-6 - Total N - Split Bottle ***VI Lab to Split for Total N*** 8oz(P)-H2SO4
1	Barn 1	2/10/23	7:20	G	DW	P			1	1
2				G					1	1
3				G					1	1
4				G					1	1
5				G					1	1
6				G					1	1
7				G					1	1
8				G					1	1
9				G					1	1
10				G					1	1

Remarks:

Relinquished	Date:	Time:	Relinquished	Date:	Time:	Relinquished	Date:	Time:
[signature]	2/10/23	1039	[signature]			GLS	2/11/23	1210
Received By:	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**
[signature]	2-10-23	1039	GLS	2/10/23	1730	[signature]	/	/

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
Phone: (805) 392-2000
Env Fax: (805) 525-4172 / Ag Fax: (805) 392-2063

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
Phone: (209) 942-0182
Fax: (209) 942-0423

Office & Laboratory
563 E. Lindo
Chico, CA 95926
Phone: (530) 343-5818
Fax: (530) 343-3807

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
Phone: (805) 783-2940
Fax: (805) 783-2912

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
Phone: (559) 734-9473
Fax: (559) 734-8435

Inter-Laboratory Condition Upon Receipt (Attach to COC)

Sample Receipt at: STK CC CH ~~VI~~ (VI)

1. Number of ice chests/packages received: 1 Shipping tracking # OTC
2. Were samples received in a chilled condition? Temps: 6.0°C R01 / ____ / ____ / ____
   Surface water SWTR bact samples: A sample that has a temperature upon receipt of >10° C, whether iced or not, should be flagged unless the time since sample collection has been less than two hours.

3.	Do the number of bottles received agree with the COC?	~~Yes~~	No	N/A
4.	Were samples received intact? (i.e. no broken bottles, leaks etc.)	~~Yes~~	No	
5.	VOAs checked for Headspace?	Yes	No	~~N/A~~
6.	Were sample custody seals intact?	Yes	No	~~N/A~~
7.	If required, was sample split for pH analysis?	Yes	No	~~N/A~~
8.	Were all analyses within holding times at time of receipt?	~~Yes~~	No	
9.	Verify sample date, time and sampler name	~~Yes~~	No	

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.
Sample Receipt Review completed by (initials): MMC

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: 2c / ____ / ____ / ____ / ____
   Acceptable is above freezing to 6 C. If many packages are received at one time check for tests/H.T.'s/rushes/
2. Shipping tracking numbers: 558796176 154 195

3.	Do the number of bottles received agree with the COC?	~~Yes~~	No	N/A
4.	Were samples received intact? (i.e. no broken bottles, leaks etc.)	~~Yes~~	No	
5.	Were sample custody seals intact?	Yes	No	~~N/A~~

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

Sample Verification, Labeling and Distribution:

1.	Were all requested analyses understood and acceptable?	~~Yes~~	No		
2.	Did bottle labels correspond with the client's ID's?	~~Yes~~	No		
3.	Were all bottles requiring sample preservation properly preserved? [Exception: Oil & Grease, VOA and CrVI verified in lab]	~~Yes~~	No	N/A	FGL
4.	VOAs checked for Headspace?	Yes	No	~~N/A~~	
5.	Have rush or project due dates been checked and accepted?	Yes	No	~~N/A~~	
6.	Were all analyses within holding times at time of receipt?	~~Yes~~	No		

Attach labels to the containers and include a copy of the COC for lab delivery.
Sample Receipt, Login and Verification completed by (initials): MDC

Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted: _____ Phone Number: _____
   Initiated By: _____ Date: _____
   Problem:
   Resolution:

2. Person Contacted: _____ Phone Number: _____
   Initiated By: _____
   Problem:
   Resolution:

(Please use the back of this sheet for additional c
contacts)

(4018505)
Livingston Dairy Consulting, Inc.
VI 2340878
iv 02/13/2023 09:52:12
VI 2340878

Tyaarda

ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

August 3, 2023

Lab No. : **VI 2344460**
Customer No. : **4018505**

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Laboratory Report

Introduction: This report package contains a total of 4 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(2 pages)	: Results for each sample submitted.
Quality Control	(1 page)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
Well #4	07/11/2023	07/11/2023	VI 2344460-001	AGW
Well #6	07/11/2023	07/11/2023	VI 2344460-002	AGW

Sampling and Receipt Information:

All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples were received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

Test Summary

EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

Certification: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: EHB

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-08-03

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

August 3, 2023

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Lab No. : VI 2344460-001
Customer No. : 4018505

Sampled On : July 11, 2023 at 06:44
Sampled By : Bruce / Noreen
Received On : July 11, 2023 at 11:38
Matrix : Ag Water

Description : Well #4
Project : W-6 Tjaarda

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	19:31	lcr
Nitrate Nitrogen	6.2	0.4	mg/L		1		07/12/2023	13:00	lfs	SM 4500-NO3 F	07/12/2023	15:52	lfs
Nitrogen, Total as Nitrogen	6.2	0.5	mg/L		1		07/28/2023	08:46	sta	Calc.	07/31/2023	19:31	lcr
Nitrate + Nitrite as N	6.2	0.4	mg/L		1		07/12/2023	13:00	lfs	SM 4500-NO3 F	07/12/2023	15:52	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	19:31	lcr
Conductivity	526	1	umhos/cm		1		07/18/2023	14:57	amm	SM 4500-H+B	07/18/2023	18:38	amm
Solids, Total Dissolved (TDS)	330	20	mg/L		1		07/13/2023	11:00	ctl	SM 2540 C	07/14/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 2 of 4

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

August 3, 2023

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Lab No. : VI 2344460-002
Customer No. : 4018505

Sampled On : July 11, 2023 at 06:51
Sampled By : Bruce / Noreen
Received On : July 11, 2023 at 11:38
Matrix : Ag Water

Description : Well #6
Project : W-6 Tjaarda

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	19:33	lcr
Nitrate Nitrogen	5.6	0.4	mg/L		1		07/12/2023	13:00	lfs	SM 4500-NO3 F	07/12/2023	15:54	lfs
Nitrogen, Total as Nitrogen	5.6	0.5	mg/L		1		07/28/2023	08:46	sta	Calc.	07/31/2023	19:33	lcr
Nitrate + Nitrite as N	5.6	0.4	mg/L		1		07/12/2023	13:00	lfs	SM 4500-NO3 F	07/12/2023	15:54	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	19:33	lcr
Conductivity	981	1	umhos/cm		1		07/18/2023	14:57	amm	SM 4500-H+B	07/18/2023	17:46	amm
Solids, Total Dissolved (TDS)	600	20	mg/L		1		07/13/2023	11:00	ctl	SM 2540 C	07/14/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 3 of 4

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

August 3, 2023

Livingston Dairy Consulting, Inc.

Lab No. : VI 2344460
Customer No. : 4018505

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2344444-001)	Dup	umhos/cm		0.6%	5	
		(CC 2382229-003)	Dup	umhos/cm		0.2%	5	
Solids, Total Dissolved	2540CE	07/13/2023:207664CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	993.7	96.6%	90-110	
		(STK2339157-001)	Dup	mg/L		1.07%	5	
		(STK2339157-001)	Dup	mg/L		0.9%	5	
Nitrogen, Total Kjeldahl	351.2	07/28/2023:208341STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	94.9%	73-124	
			MS	mg/L	12.00	94.6%	54-136	
		(SP 2311944-003)	MSD	mg/L	12.00	94.6%	54-136	
			MSRPD	mg/L		0.0%	≤27	
			MS	mg/L	12.00	93.8%	54-136	
		(SP 2311944-004)	MSD	mg/L	12.00	92.6%	54-136	
			MSRPD	mg/L		1.2%	≤27	
Nitrate + Nitrite as N	4500NO3F	07/12/2023:207621LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	100%	80-120	
			MS	mg/L	5.609	89.0%	66-125	
		(STK2339067-001)	MSD	mg/L	5.609	89.7%	66-125	
			MSRPD	mg/L		0.2%	≤30.4	
Nitrate Nitrogen	4500NO3F	07/12/2023:207621LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	100%	80-120	
			MS	mg/L	5.609	89.0%	66-125	
		(STK2339067-001)	MSD	mg/L	5.609	89.7%	66-125	
			MSRPD	mg/L		0.2%	≤30.4	

Definition

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

ND : Non-detect - Result was below the DQO listed for the analyte.

Page 4 of 4

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
FAX: (530)343-3807
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
FAX: (805)783-2912
CA ELAP Certification No. 2775

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

FGL ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

Special

CHAIN OF CUSTODY
www.fglinc.com

Laboratory Copy (1 of 2)

42086:04/01/2023

Client: **Livingston Dairy Consulting, Inc.**

Address: Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Phone: (559)687-1440 Fax:

Contact Person: Noreen Livingston

Project Name: W-6 Tjaarda

Purchase Order Number:

Quote Number: **VI 20210208-01**

Sampler(s): BRUCE / NOREEN

Sampling Fee: _____ Pickup Fee: _____

Composition Setup Date: ___/___/___ Time: ___/___

Lab Number: **VI** 2344460 **4-18505**

TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information

Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)	Dairy Analysis-W-6-Conductivity,NO3-N,Total N,TDS 16oz(P)	Bottles/Containers Split Fee 8oz(P)-H2SO4
1	# well #4	7/11/23	6:49 AM	G	AgW	NP			1	1
2	6 well #6	7/11/23	6:51 AM	G	AgW	NP			1	1
3				G					1	1
4				G					1	1
5				G					1	1
6				G					1	1
7				G					1	1
8				G					1	1
9				G					1	1
10				G					1	1

Remarks:

Relinquished	Date:	Time:	Relinquished	Date:	Time:	Relinquished	Date:	Time:
	7/11/23	11:38		7/11/23	1730	GLD	7/12/23	0710
Received By:	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**
ADH	7/11/23	1138		7/11/23	1730		7/12/23	0710

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
Phone: (805) 392-2000
Env Fax: (805) 525-4172 / Ag Fax: (805) 392-2063

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
Phone: (209) 942-0182
Fax: (209) 942-0423

Office & Laboratory
563 E. Lindo
Chico, CA 95926
Phone: (530) 343-5818
Fax: (530) 343-3807

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
Phone: (805) 783-2940
Fax: (805) 783-2912

Office & Laboratory
9415 W. Goshen Avenue
Visalia, CA 93291
Phone: (559) 734-9473
Fax: (559) 734-8435

Inter-Laboratory Condition Upon Receipt (Attach to COC)

Sample Receipt at: STK CC CH VI

1. Number of ice chests/packages received: 1 Shipping tracking # OTC
2. Were samples received in a chilled condition? Temps: 10 / 7.4 / ___ / ___ / ___

Surface water SWTR bact samples: A sample that has a temperature upon receipt of >10° C, whether iced or not, should be flagged unless the time since sample collection has been less than two hours.

3.	Do the number of bottles received agree with the COC?	Yes	No	N/A
4.	Were samples received intact? (i.e. no broken bottles, leaks etc.)	Yes	No	
5.	VOAs checked for Headspace?	Yes	No	N/A
6.	Were sample custody seals intact?	Yes	No	N/A
7.	If required, was sample split for pH analysis?	Yes	No	N/A
8.	Were all analyses within holding times at time of receipt?	Yes	No	
9.	Verify sample date, time and sampler name	Yes	No	

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.
Sample Receipt Review completed by (initials): AJH

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: 5 / 6 / 4 / 4 / ___

Acceptable is above freezing to 6 C. If many packages are received at one time check for tests/H.T.'s/rushes/

2. Shipping tracking numbers:
   [illegible]

3.	Do the number of bottles received agree with the COC?	Yes	No	N/A
4.	Were samples received intact? (i.e. no broken bottles, leaks etc.)	Yes	No	
5.	Were sample custody seals intact?	Yes	No	N/A

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

Sample Verification, Labeling and Distribution:

1.	Were all requested analyses understood and acceptable?	Yes	No		
2.	Did bottle labels correspond with the client's ID's?	Yes	No		
3.	Were all bottles requiring sample preservation properly preserved? [Exception: Oil & Grease, VOA and CrVI verified in lab]	Yes	No	N/A	FGL
4.	VOAs checked for Headspace?	Yes	No	N/A	
5.	Have rush or project due dates been checked and accepted?	Yes	No	N/A	
6.	Were all analyses within holding times at time of receipt?	Yes	No		

Attach labels to the containers and include a copy of the COC for lab delivery.
Sample Receipt, Login and Verification completed by (initials): [illegible]

Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted: _____ Phone Number: _____
   Initiated By: _____ Date: _____
   Problem:
   Resolution:

2. Person Contacted: _____
   Initiated By: _____
   Problem:
   Resolution:

(Please use the back of this sheet for additi... contacts)

(4018505)
Livingston Dairy Consulting, Inc.
VI 2344460
iv 07/12/2023 09:05:22
VI 2344460
2344460

here

2023 KERN RIVER - CANAL RESULTS

Check #1

LOCATION OF TESTS

IRRIGATION WATER ANALYSIS
ALL CONSTITUENTS P.P.M. (MGN/LITER)

DATE OF TESTING	LABS USED	LAB NUM.	u/g L ARSENIC	mg/L CALCIUM	mg/L MAGNESIUM	mg/L SODIUM	mg/L POTASSIUM	mg/L HYDROXIDE	mg/L CARBONATE	mg/L BICARBONATE	mg/L CHLORIDE	mg/L FLUORIDE	mg/L SULFATE	mg/L NO 3 NITRATE	mg/L NO 3-N NITRATE	mg/L PHOSPATE	Std Units PH	umho/cm EC @ 25 C	mg/L TOTAL DISSOLVED SOLIDS	mg/L TOTAL HARDNESS AS CACO3	mg/L BORON	Ratio SAR OF WATER	% ESP OF SOIL	lbs/ac-ft GYP REQ.	Std Units PHC	Ratio ADJ SAR
02/23/22	OEC	2201203-05	None Det.	21.00	3.40	130.00	4.10	None Det.	None Det.	180.0	86.0	0.53	9.2	None Det.	None Det.	None Det.	7.40	680.0	430.00	67.0	0.76	6.70	8.90	538.0	6.81	7.20
03/15/22	OEC	2201604-05	None Det.	21.00	3.30	120.00	3.90	None Det.	None Det.	180.0	94.0	0.52	8.7	None Det.	None Det.	None Det.	7.35	650.0	470.00	67.0	0.79	6.60	8.70	536.0	6.50	7.10
04/08/22	OEC	2202151-05	None Det.	22.00	3.40	120.00	4.10	None Det.	None Det.	170.0	92.0	0.50	16.0	None Det.	None Det.	None Det.	7.43	670.0	440.00	70.0	0.77	6.30	8.40	468.0	7.00	6.70
05/24/22	OEC	2203176-05	None Det.	20.00	3.20	120.00	3.80	None Det.	None Det.	190.0	90.0	0.48	11.0	None Det.	None Det.	None Det.	7.17	660.0	470.00	63.0	0.69	6.50	8.00	585.0	5.36	7.00
06/21/22	OEC	2203781-05	None Det.	18.00	2.80	110.00	3.20	None Det.	None Det.	160.0	81.0	0.46	11.0	None Det.	None Det.	None Det.	7.61	640.0	380.00	56.0	0.61	6.30	8.40	491.0	6.11	6.50
07/19/22	OEC	2204358-05	None Det.	18.00	2.40	70.00	2.40	None Det.	None Det.	100.0	49.0	None Det.	27.0	None Det.	None Det.	None Det.	7.42	480.0	260.00	56.0	0.36	4.10	6.20	211.0	6.93	3.70
08/01/22	OEC	2204664-05	None Det.	19.00	2.80	110.00	3.20	None Det.	None Det.	170.0	86.0	0.54	11.0	None Det.	None Det.	None Det.	7.57	640.0	410.00	58.0	0.62	6.50	8.60	516.0	7.86	6.70
09/01/22	OEC	2205388-07	None Det.	20.00	2.80	120.00	3.40	None Det.	None Det.	170.0	100.0	0.52	16.0	None Det.	None Det.	None Det.	7.44	660.0	460.00	63.0	0.62	7.00	9.20	516.0	7.06	7.40
10/06/22	OEC	2206250-05	None Det.	27.00	2.40	110.00	3.60	None Det.	None Det.	150.0	90.0	None Det.	59.0	None Det.	None Det.	None Det.	7.47	720.0	470.00	78.0	0.52	5.40	7.50	351.0	7.24	5.80
11/03/22	OEC	2206972-05	None Det.	21.00	3.00	120.00	4.00	None Det.	None Det.	190.0	94.0	0.51	15.0	None Det.	None Det.	None Det.	7.20	670.0	420.00	66.0	0.68	6.40	8.50	585.0	6.57	6.90
01/06/23	OEC	2300177-05	None Det.	21.00	3.30	120.00	4.10	None Det.	None Det.	200.0	99.0	0.5	8.4	None Det.	None Det.	None Det.	7.87	710.0		470.00	67.0			0.75	6.20	6.30
02/09/23	OEC	2301037-05	None Det.	22.00	3.80	130.00	4.10	None Det.	None Det.	200.0	100.0	0.46	8.7	None Det.	None Det.	None Det.	6.58	730.0		470.00	71.0			0.72	6.80	9.00
03/03/23	OEC	2301699-06	None Det.	23.00	3.20	110.00	4.10	None Det.	None Det.	180.0	98.0	0.43	9.9	None Det.	None Det.	None Det.	7.08	640.0		459.00	70.0			0.64	5.90	7.70
04/21/23	OEC	2300083-05	None Det.	14.00	2.50	42.00	2.20	None Det.	None Det.	91.0	31.0	None Det.	7.8	None Det.	None Det.	None Det.	7.87	300.0		226.00	47.0			0.26	2.70	4.70
05/19/23	OEC	2303878-05	None Det.	13.00	2.10	37.00	2.40	None Det.	None Det.	78.0	28.0	None Det.	5.9	None Det.	None Det.	None Det.	7.59	260.0		180.00	40.0			None Det	2.50	4.50
06/13/23	OEC	2304531-09	None Det.	11.00	1.80	33.00	2.10	None Det.	None Det.	69.0	23.0	None Det.	5.0	None Det.	None Det.	None Det.	7.00	210.0		150.00	35.0			None Det	2.40	4.40
07/11/23	OEC	2305247-06	None Det.	9.10	1.50	25.00	1.50	None Det.	None Det.	60.0	18.0	None Det.	4.2	None Det.	None Det.	None Det.	7.54	140.0		94.00	29.0			None Det	2.00	4.00
08/03/23	OEC	2306030-04	None Det.	6.20	1.10	11.00	1.10	None Det.	None Det.	37.0	5.7	None Det.	3.2	None Det.	None Det.	None Det.	7.74	93.0		74.00	20.0			None Det	1.10	3.10
09/06/23	OEC	2306941-05	None Det.	10.00	1.80	27.00	1.80	None Det.	None Det.	61.0	15.0	None Det.	4.7	None Det.	None Det.	None Det.	7.52	180.0		120.00	32.0			None Det	2.00	4.00
10/03/23	OEC	2307684-05	None Det.	14.00	2.30	49.00	2.00	None Det.	None Det.	88.0	37.0	None Det.	8.7	None Det.	None Det.	None Det.	7.28	320.0		200.00	45.0			0.31	3.20	5.20

Check #5

LOCATION OF TESTS

IRRIGATION WATER ANALYSIS
ALL CONSTITUENTS P.P.M. (MGN/LITER)

DATE OF TESTING	LABS USED	LAB NUM.	u/g L ARSENIC	mg/L CALCIUM	mg/L MAGNESIUM	mg/L SODIUM	mg/L POTASSIUM	mg/L HYDROXIDE	mg/L CARBONATE	mg/L BICARBONATE	mg/L CHLORIDE	mg/L FLUORIDE	mg/L SULFATE	mg/L NO 3 NITRATE	mg/L NO 3-N NITRATE	mg/L PHOSPATE	Std Units PH	umho/cm EC @ 25 C	mg/L TOTAL DISSOLVED SOLIDS	mg/L TOTAL HARDNESS AS CACO3	mg/L BORON
02/23/22	OEC	2201203-0	None Det.	10.00	1.50	92.00	1.90	None Det.	None Det.	120.0	57.0	0.50	13.0	None Det.	None Det.	None Det.	8.05	480.0	290.00	32.0	0.40
03/15/22	OEC	2201604-0	None Det.	16.00	2.40	110.00	3.00	None Det.	None Det.	160.0	77.0	0.51	9.3	None Det.	None Det.	None Det.	7.87	550.0	380.00	50.0	0.61
04/08/22	OEC	2202151-0	None Det.	7.10	0.84	81.00	1.30	None Det.	None Det.	110.0	44.0	0.53	16.0	None Det.	None Det.	None Det.	8.55	390.0	260.00	21.0	0.33
05/24/22	OEC	2203176-0	None Det.	12.00	1.60	93.00	2.00	None Det.	None Det.	130.0	65.0	0.47	16.0	None Det.	None Det.	None Det.	7.67	520.0	350.00	37.0	0.42
06/21/22	OEC	2203781-0	None Det.	6.40	0.79	76.00	0.96	None Det.	None Det.	97.0	46.0	0.44	13.0	None Det.	None Det.	None Det.	8.58	400.0	250.00	19.0	0.26
07/19/22	OEC	2204358-0	None Det.	15.00	1.90	68.00	1.90	None Det.	None Det.	110.0	46.0	0.40	23.0	None Det.	None Det.	None Det.	7.85	450.0	280.00	45.0	0.30
08/01/22	OEC	2204664-0	None Det.	11.00	1.60	91.00	1.90	None Det.	None Det.	130.0	66.0	0.53	12.0	None Det.	None Det.	None Det.	8.00	500.0	300.00	35.0	0.40
09/01/22	OEC	2205388-0	None Det.	13.00	1.60	93.00	2.10	None Det.	None Det.	130.0	75.0	0.51	16.0	None Det.	None Det.	None Det.	7.82	540.0	350.00	39.0	0.42
10/06/22	OEC	2206250-0	None Det.	21.00	1.50	88.00	2.40	None Det.	None Det.	110.0	68.0	None Det.	58.0	None Det.	None Det.	None Det.	7.93	600.0	350.00	59.0	0.33
11/03/22	OEC	2206972-0	None Det.	15.00	2.10	100.00	3.10	None Det.	None Det.	150.0	75.0	0.54	14.0	None Det.	None Det.	None Det.	7.88	550.0	350.00	47.0	0.51

Manure/Process Wastewater Tracking Manifest For Existing Milk Cow Dairies

Instructions:

1) Complete one manifest for each hauling event, for each destination. A hauling event may last for several days, as long as the manure is being hauled to the same destination.
2) If there are multiple destinations, **complete a separate form for each destination.**
3) The operator must obtain the signature of the hauler upon completion of each manure-hauling event.
4) The operator shall submit copies of manure/process wastewater tracking manifest(s) with the Annual Monitoring Report for Existing Milk Cow Dairies.

Operator Information:

Name of Operator: Perry Tjaarda

Name of Dairy Facility: Tjaarda Dairy

Facility Address: 19211 Magnolia Ave. Shafter 93263
Number and Street City Zip Code

Contact Person Name: Perry 661-428-3270
Name Phone Number

Manure/Process Wastewater Hauler Information:

Name of Hauling Company/Person: _____

Address of Hauling Company /Person: _____
Number and Street City Zip Code

Contact Person: _____
Name Phone Number

Destination Information:

~~Composting Facility~~ / Broker / Farmer / Other (identify) _____ (please circle one)

Contact information of : Composting Facility, Broker, Farmer, or Other (as identified above):

R&M Composting P.O. Box 700 Wasco
Name Number and Street City Zip Code Phone Number 661-699-0479

Manure/Process Wastewater Destination Address or Assessor's Parcel Number:

_____
Number and Street City Zip Code Assessor's Parcel Number

Dates Hauled: _____

Amount Hauled:

Enter the amount of manure hauled in tons or cubic yards (indicate the units used), the manure solids content (if amount reported in tons) or manure density (if amount reported in cubic yards), and the method used to calculate the amount:

- Manure: 11,561.80 Tons or Cubic Yards (Indicate which units used)
- Manure Moisture % : _____
- Method used to determine amount of manure: _____

Enter the amount of process wastewater hauled in gallons and the method used to determine the amount.

- Process Wastewater: _____ Gallons
- Method used to determine volume of process wastewater: _____

Written Agreement:

Does the Operator have a written agreement (in compliance with Land Application Specification C.2 of Waste Discharge Requirements General Order No. R5-2007-0035) with any party that receives process wastewater from the Operator for its own use? (please check one)

_____ Yes _____ No

If the answer is no, the Operator agrees to have such a written agreement with any such party for any process wastewater transferred after **31 December 2007** to such party.

_____ (Operator shall provide initials here to acknowledge this requirement).

Certification:

I declare under the penalty of law that I personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Operator's Signature: Perry Tjaarda Date: 4-10-24

Hauler's Signature: _____ Date: _____