

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

DAIRY FACILITY INFORMATION

A. NAME OF DAIRY OR BUSINESS OPERATING THE DAIRY: Dutra & Dutra Dairy

Physical address of dairy:

7480 5th AVE Number and Street	Hanford City	Kings County	93230 Zip Code
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Street and nearest cross street (if no address): _____

Date facility was originally placed in operation: 01/01/1940

Regional Water Quality Control Board Basin Plan designation: Tulare Basin

County Assessor Parcel Number(s) for dairy facility:

X014-X040-X021-XXXX X014-X100-X029-XXXX

B. OPERATORS

Dutra, Manuel

Operator name: <u>Dutra, Manuel</u>	Telephone no.: <u>(559) 582-3468</u>	<u>(559) 816-4770</u>
	<u>Landline</u>	<u>Cellular</u>
7480 5th AVE Mailing Address Number and Street	Hanford City	CA State
		93230 Zip Code

This operator is responsible for paying permit fees.

C. OWNERS

Dutra, Manuel

Legal owner name: <u>Dutra, Manuel</u>	Telephone no.: <u>(559) 582-3468</u>	<u>(559) 816-4770</u>
	<u>Landline</u>	<u>Cellular</u>
7480 5th AVE Mailing Address Number and Street	Hanford City	CA State
		93230 Zip Code

This owner is responsible for paying permit fees.

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AVAILABLE NUTRIENTS

A. HERD INFORMATION

	Milk Cows	Dry Cows	Bred Heifers (15-24 mo.)	Heifers (7-14 mo. to breeding)	Calves (4-6 mo.)	Calves (0-3 mo.)
Number open confinement	0	0	40	40	28	0
Number under roof	460	70	0	0	0	0
Maximum number	480	80	50	40	32	0
Average number	470	75	45	40	30	0
Avg live weight (lbs)	1,450	1,500	1,100	90		

Predominant milk cow breed: Holstein

Average milk production: 64 pounds per cow per day

B. MANURE GENERATED

Total manure excreted by the herd: 13,721.86 tons per reporting period

Total nitrogen from manure: 176,588.47 lbs per reporting period

After ammonia losses (30% loss applied): 123,611.93 lbs per reporting period

Total phosphorus from manure: 29,170.19 lbs per reporting period

Total potassium from manure: 88,156.60 lbs per reporting period

Total salt from manure: 238,545.75 lbs per reporting period

C. PROCESS WASTEWATER GENERATED

Process wastewater generated: 1,410,000 gallons

Total nitrogen generated: 8,599.42 lbs

$$\begin{aligned}
 & 1,410,000 \text{ gallons applied} \\
 & + 0 \text{ gallons exported} \\
 & - 0 \text{ gallons imported} \\
 & = 1,410,000 \text{ gallons generated}
 \end{aligned}$$

Total phosphorus generated: 1,053.62 lbs

Total potassium generated: 10,384.52 lbs

Total salt generated: 57,547.95 lbs

D. FRESH WATER SOURCES

Source Description	Type
Canal	Surface water
Domestic	Ground water
Well 2	Ground water

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E. SUBSURFACE (TILE) DRAINAGE SOURCES

No subsurface (tile) drainage sources entered.

F. NUTRIENT IMPORTS

No dry manure nutrient imports entered.

No process wastewater nutrient imports entered.

No commercial or other nutrient imports entered.

G. NUTRIENT EXPORTS

No solid nutrient exports entered.

No liquid nutrient exports entered.

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APPLICATION AREA**A. LIST OF LAND APPLICATION AREAS**

Field name	Controlled acres	Cropable acres	Total harvests	Type of waste applied	Parcel number
Field 1	110	102	0	none	0014-0100-0004-0000 0014-0100-0005-0000
Field 19	65	65	1	process wastewater	0014-0100-0029-0000
Field 2	48	48	1	none	0014-0100-0014-0000
Field 3	37	37	0	none	0014-0100-0015-0000
Field 5	39	39	1	both	0014-0100-0025-0000
Field 6	39	39	1	both	0014-0100-0025-0000
Totals for areas that were used for application	143	143	3		
Totals for areas that were not used for application	195	187	1		
Land application area totals	338	330	4		

B. CROPS AND HARVESTS**Field 19**

Field name: Field 19

06/20/2023: Corn, silage

Crop: Corn, silage Acres planted: _____ 65 Plant date: 06/20/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/06/2023	1,648.80 ton	As-is		67.8	3,600.00	1,500.00	4,400.00		5.60

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	26.50	259.70	164.30	318.00	0.00
Total actual harvest content	25.37	182.64	76.10	223.22	914.80

Field 2

Field name: Field 2

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Field 2

01/01/2023: Alfalfa, hay

Crop: Alfalfa, hay Acres planted: 48 Plant date: 01/01/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
12/31/2023	410.00 ton	As-is		8.9	42,000.00	4,400.00	25,800.00		9.36

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	10.00	262.00	40.00	302.00	0.00
Total actual harvest content	8.54	717.50	75.17	440.75	1,456.69

Field 5

Field name: Field 5

11/15/2022: Wheat Hay

Crop: Wheat Hay Acres planted: 39 Plant date: 11/15/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
07/28/2023	150.00 ton	As-is		6.3	15,500.00	2,300.00	18,300.00		7.95

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	6.00	157.20	24.00	181.20	0.00
Total actual harvest content	3.85	119.23	17.69	140.77	573.01

Field 6

Field name: Field 6

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Field 6

11/15/2022: Wheat Hay

Crop: Wheat Hay Acres planted: 39 Plant date: 11/15/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
07/28/2023	164.00 ton	As-is		6.7	15,000.00	2,200.00	17,100.00		6.73

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	6.00	157.20	24.00	181.20	0.00
Total actual harvest content	4.21	126.15	18.50	143.82	528.09

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NUTRIENT BUDGET

A. LAND APPLICATIONS

Field 19 - 06/20/2023: Corn, silage

Field name: Field 19

Crop: Corn, silage

Plant date: 06/20/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following
05/25/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation
	Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)
	Lagoon	Process wastewater	14.37	1.73	17.29
	Canal	Surface water	0.00	0.00	0.00
	Application event totals		14.37	1.73	17.29
06/15/2023	Sidedress	No precipitation	No precipitation	No precipitation	No precipitation
	Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)
	PrePlant	Solid commercial fertilizer	75.00	0.00	0.00
	Application event totals		75.00	0.00	0.00
07/15/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation
	Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)
	Canal	Surface water	0.00	0.00	0.00
	Application event totals		0.00	0.00	0.00
07/12/2023	Sidedress	No precipitation	No precipitation	No precipitation	No precipitation
	Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)
	Sidedress	Solid commercial fertilizer	75.00	0.00	0.00
	Application event totals		75.00	0.00	0.00
07/27/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation
	Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)
	Lagoon	Process wastewater	14.37	1.73	17.29
	Canal	Surface water	0.00	0.00	0.00
	Application event totals		14.37	1.73	17.29
					105.44

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Field 19 - 06/20/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
08/09/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Nitrogen	Liquid commercial fertilizer	50.00	0.00	0.00	0.00	
Canal	Surface water	0.00	0.00	0.00	11.55	7,500,000.00 gal
Application event totals		50.00	0.00	0.00	11.55	

Field 2 - 01/01/2023: Alfalfa, hay

Field name: Field 2

Crop: Alfalfa, hay Plant date: 01/01/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
03/05/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well 2	Ground water	0.42	0.00	0.00	264.87	4,800,000.00 gal
Application event totals		0.42	0.00	0.00	264.87	
04/05/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well 2	Ground water	0.44	0.00	0.00	278.11	5,040,000.00 gal
Application event totals		0.44	0.00	0.00	278.11	
05/16/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Canal	Surface water	0.00	0.00	0.00	11.27	5,400,000.00 gal
Application event totals		0.00	0.00	0.00	11.27	
06/15/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Canal	Surface water	0.00	0.00	0.00	11.17	5,355,000.00 gal
Application event totals		0.00	0.00	0.00	11.17	

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Field 2 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
07/10/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Canal	Surface water	0.00	0.00	0.00	11.08	5,310,000.00 gal
Application event totals		0.00	0.00	0.00	11.08	
08/01/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Canal	Surface water	0.00	0.00	0.00	11.27	5,400,000.00 gal
Application event totals		0.00	0.00	0.00	11.27	

Field 5 - 11/15/2022: Wheat Hay

Field name: Field 5

Crop: Wheat Hay

Plant date: 11/15/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
11/02/2022	Plow/disc	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure	Corral solids	49.20	16.40	79.20	0.00	78.00 ton
Application event totals		49.20	16.40	79.20	0.00	
11/26/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	20.21	3.16	28.04	138.66	180,000.00 gal
Well 2	Ground water	0.51	0.00	0.00	325.99	4,800,000.00 gal
Application event totals		20.72	3.16	28.04	464.65	
02/05/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well 2	Ground water	0.48	0.00	0.00	305.62	4,500,000.00 gal
Application event totals		0.48	0.00	0.00	305.62	

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Field 5 - 11/15/2022: Wheat Hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
04/20/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	33.52	4.04	40.35	219.28	210,000.00 gal
Canal	Surface water	0.00	0.00	0.00	9.63	3,750,000.00 gal
Application event totals		33.52	4.04	40.35	228.91	
05/15/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	23.94	2.89	28.82	156.63	150,000.00 gal
Canal	Surface water	0.00	0.00	0.00	12.32	4,800,000.00 gal
Application event totals		23.94	2.89	28.82	168.95	

Field 6 - 11/15/2022: Wheat Hay

Field name:	Field 6	Plant date:	11/15/2022			
Crop:	Wheat Hay					
Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
11/02/2022	Plow/disc	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure	Corral solids	48.95	16.32	78.79	0.00	77.60 ton
Application event totals		48.95	16.32	78.79	0.00	
11/26/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	37.48	4.21	42.24	271.85	210,000.00 gal
Well 2	Ground water	0.51	0.00	0.00	325.99	4,800,000.00 gal
Application event totals		37.99	4.21	42.24	597.85	

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Field 6 - 11/15/2022: Wheat Hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
02/05/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well 2	Ground water	0.48	0.00	0.00	305.62	4,500,000.00 gal
Application event totals		0.48	0.00	0.00	305.62	
04/20/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	33.52	4.04	40.35	219.28	210,000.00 gal
Canal	Surface water	0.00	0.00	0.00	9.63	3,750,000.00 gal
Application event totals		33.52	4.04	40.35	228.91	
05/15/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	23.94	2.89	28.82	156.63	150,000.00 gal
Canal	Surface water	0.00	0.00	0.00	12.32	4,800,000.00 gal
Application event totals		23.94	2.89	28.82	168.95	

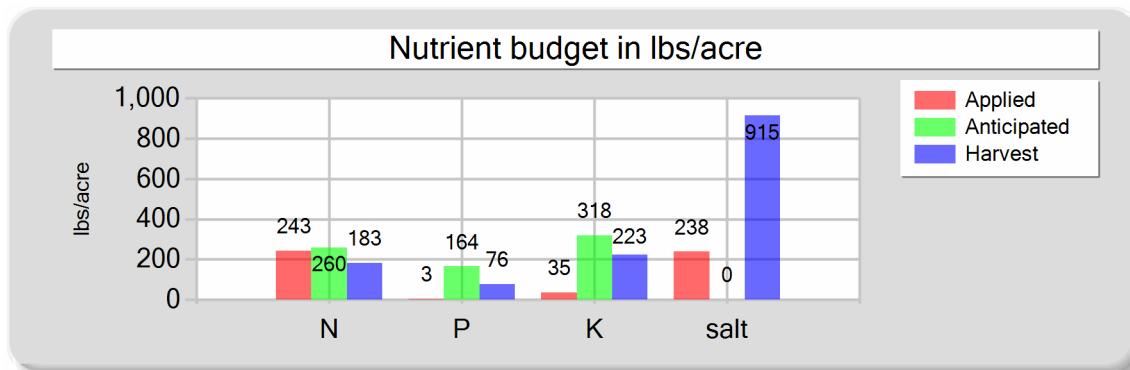
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B. NUTRIENT BUDGET

Field 19 - 06/20/2023: Corn, silage

Field name: Field 19 Crop: Corn, silage Plant date: 06/20/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	200.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	28.73	3.47	34.59	187.96
Fresh water	0.00	0.00	0.00	49.73
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	242.73	3.47	34.59	237.69
Anticipated crop nutrient removal	259.70	164.30	318.00	0.00
Actual crop nutrient removal	182.64	76.10	223.22	914.80
Nutrient balance	60.10	-72.63	-188.64	-677.12
Applied to removed ratio	1.33	0.05	0.15	0.26

Fresh water applied
32,280,000.00 gallons
1,188.76 acre-inches
18.29 inches/acre
Process wastewater applied
300,000.00 gallons
11.05 acre-inches
0.17 inches/acre
Total harvests for the crop
1 harvests

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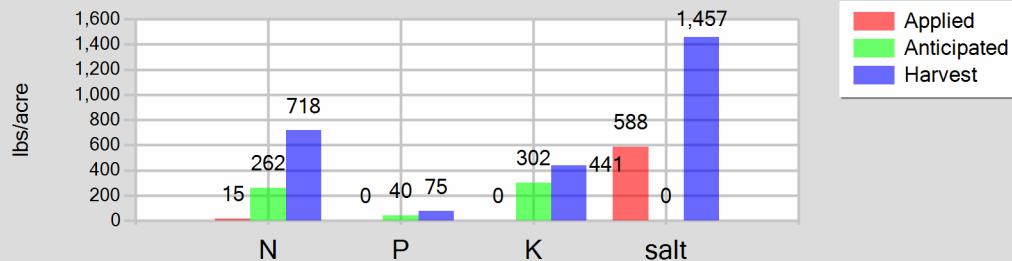
Field 2 - 01/01/2023: Alfalfa, hay

Field name: Field 2

Crop: Alfalfa, hay

Plant date: 01/01/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	0.86	0.00	0.00	587.77
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	14.86	0.00	0.00	587.77
Anticipated crop nutrient removal	262.00	40.00	302.00	0.00
Actual crop nutrient removal	717.50	75.17	440.75	1,456.69
Nutrient balance	-702.64	-75.17	-440.75	-868.92
Applied to removed ratio	0.02	0.00	0.00	0.40

Fresh water applied

31,305,000.00 gallons
1,152.86 acre-inches
24.02 inches/acre

Process wastewater applied

0.00 gallons
0.00 acre-inches
0.00 inches/acre

Total harvests for the crop

1 harvests

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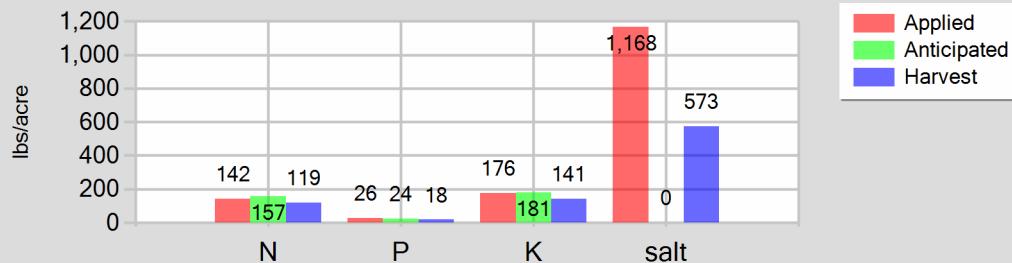
Field 5 - 11/15/2022: Wheat Hay

Field name: Field 5

Crop: Wheat Hay

Plant date: 11/15/2022

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	49.20	16.40	79.20	0.00
Process wastewater	77.67	10.09	97.21	514.57
Fresh water	0.99	0.00	0.00	653.57
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	141.87	26.49	176.41	1,168.13
Anticipated crop nutrient removal	157.20	24.00	181.20	0.00
Actual crop nutrient removal	119.23	17.69	140.77	573.01
Nutrient balance	22.63	8.80	35.64	595.12
Applied to removed ratio	1.19	1.50	1.25	2.04

Fresh water applied

17,850,000.00 gallons
657.35 acre-inches
16.86 inches/acre

Process wastewater applied

540,000.00 gallons
19.89 acre-inches
0.51 inches/acre

Total harvests for the crop

1 harvests

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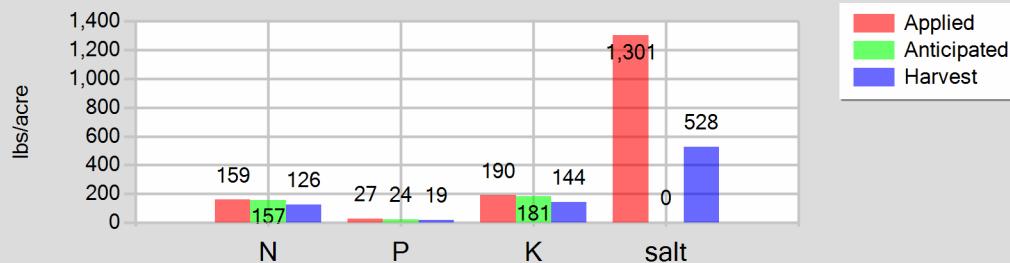
Field 6 - 11/15/2022: Wheat Hay

Field name: Field 6

Crop: Wheat Hay

Plant date: 11/15/2022

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	48.95	16.32	78.79	0.00
Process wastewater	94.94	11.15	111.41	647.76
Fresh water	0.99	0.00	0.00	653.57
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	158.88	27.46	190.21	1,301.33
Anticipated crop nutrient removal	157.20	24.00	181.20	0.00
Actual crop nutrient removal	126.15	18.50	143.82	528.09
Nutrient balance	32.73	8.96	46.39	773.24
Applied to removed ratio	1.26	1.48	1.32	2.46

Fresh water applied

17,850,000.00 gallons
657.35 acre-inches
16.86 inches/acre

Process wastewater applied

570,000.00 gallons
20.99 acre-inches
0.54 inches/acre

Total harvests for the crop

1 harvests

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Reporting period 01/01/2023 to 12/31/2023.

NUTRIENT ANALYSES**A. MANURE ANALYSES**

22J1527

Sample and source description: 22J1527

Sample date: 10/24/2022 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 44.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,300.00	4,100.00	19,800.00	13,900.00	5,000.00	5,300.00	3,600.00	7,000.00		0.00
DL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		10.00

23F1449

Sample and source description: 23F1449

Sample date: 06/14/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 31.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	17,400.00	4,600.00	14,600.00							0.00
DL	0.01	0.01	0.01							10.00

23I1781

Sample and source description: 23I1781

Sample date: 09/27/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 45.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	14,100.00	4,500.00	18,700.00	13,200.00	4,600.00	4,600.00	3,500.00	6,000.00		0.00
DL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		10.00

B. PROCESS WASTEWATER ANALYSES

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

22J1513

Sample and source description: 22J1513

Sample date: 10/24/2022 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	523.00	394.00	0.00	1.60	82.00	728.00									3,600
DL	0.01	0.01	0.01	0.01	0.01	0.01									10

23A0713

Sample and source description: 23A0713

Sample date: 01/26/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	680.00	492.00	0.00	1.40	106.00	776.00									4,260
DL	0.01	0.01	0.01	0.01	0.01	0.01									10

23F1438

Sample and source description: 23F1438

Sample date: 06/14/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	745.00	499.00	0.00	1.00	90.00	898.00									4,880
DL	0.01	0.01	0.01	0.01	0.01	0.01									10

23I1775

Sample and source description: 23I1775

Sample date: 09/27/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	478.00	363.00	0.00	1.00	77.70	566.00	186.00	119.00	263.00	2,810.00	0.00	3.70	625.00		4,220
DL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	10

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

23L0256

Sample and source description: 23L0256

Sample date: 12/05/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	834.00	463.00	0.00	0.00	93.80	940.00	320.00	141.00	329.00	4,190.00	0.00	0.00	507.00		6,050
DL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		10

C. FRESH WATER ANALYSES

Canal

23I0730

Sample description: 23I0730

Sample date: 09/11/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.00										20.00	
DL	0.01										10.00	

Domestic

23L0254

Sample description: 23L0254

Sample date: 12/05/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	3.80										586.00	
DL	0.01										10.00	

Well 2

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

Well 2

22F2063

Sample description: 22F2063

Sample date: 06/28/2022 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.50										529.00	
DL	0.01										10.00	

D. SOIL ANALYSES

No soil analyses entered.

E. PLANT TISSUE ANALYSES

Field 19 - 06/20/2023: Corn, silage

23K0390

Sample and source description: 23K0390

Sample date: 11/06/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 67.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	3,600.00	1,500.00	4,400.00		5.60
DL	0.01	0.01	0.01		0.01

Field 2 - 01/01/2023: Alfalfa, hay

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Reporting period 01/01/2023 to 12/31/2023.

Field 2 - 01/01/2023: Alfalfa, hay

33781 025

Sample and source description: 33781 025

Sample date: 05/25/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 8.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	42,000.00	4,400.00	25,800.00		9.36
DL	0.01	0.01	0.01		0.01

Field 5 - 11/15/2022: Wheat Hay

32470 220

Sample and source description: 32470 220

Sample date: 07/28/2022 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 6.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	15,500.00	2,300.00	18,300.00		7.95
DL	0.01	0.01	0.01		0.01

Field 6 - 11/15/2022: Wheat Hay

32470 221

Sample and source description: 32470 221

Sample date: 07/28/2022 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 6.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	15,000.00	2,200.00	17,100.00		6.73
DL	0.01	0.01	0.01		0.01

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Reporting period 01/01/2023 to 12/31/2023.

F. SUBSURFACE (TILE) DRAINAGE ANALYSES

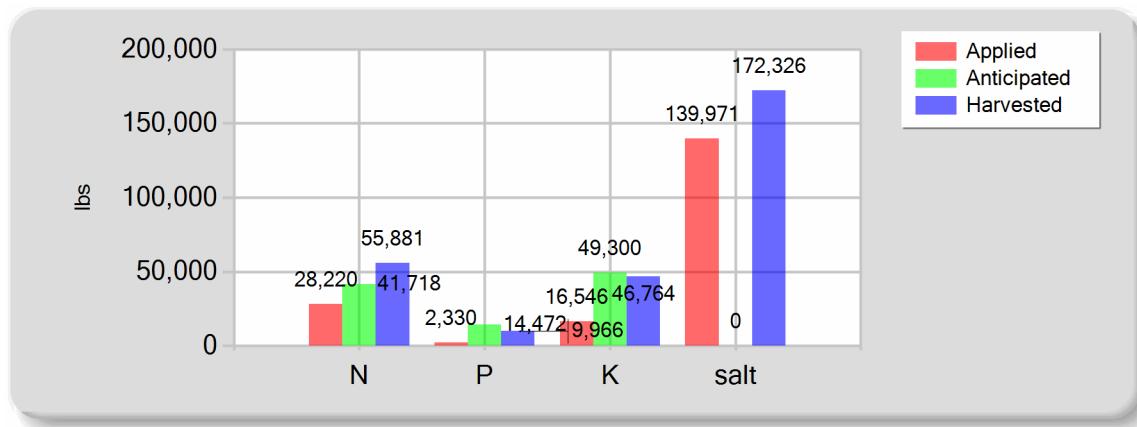
No subsurface (tile) drainage analyses entered.

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE**A. SUMMARY OF NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE**

	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	13,000.00	0.00	0.00	0.00
Dry manure	3,827.76	1,275.92	6,161.76	0.00
Process wastewater	8,599.42	1,053.62	10,384.52	57,547.95
Fresh water	118.67	0.00	0.00	82,423.53
Atmospheric deposition	2,674.00	0.00	0.00	0.00
Total nutrients applied	28,219.85	2,329.54	16,546.28	139,971.49
Anticipated crop nutrient removal	41,718.10	14,471.50	49,299.60	0.00
Actual crop nutrient removal	55,881.36	9,966.00	46,764.24	172,326.26
Nutrient balance	-27,661.51	-7,636.46	-30,217.96	-32,354.77
Applied to removed ratio	0.50	0.23	0.35	0.81

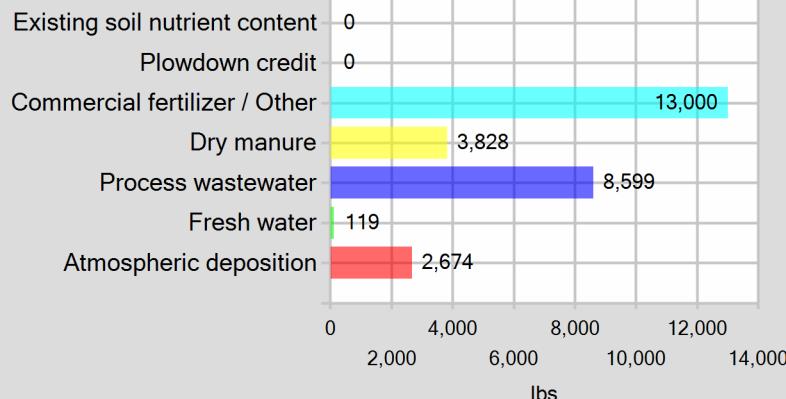
B. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL

Annual Report - General Order No. R5-2007-0035

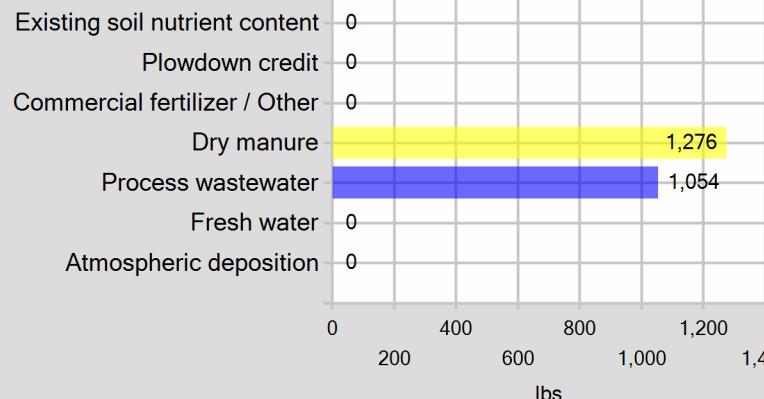
Reporting period 01/01/2023 to 12/31/2023.

C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE

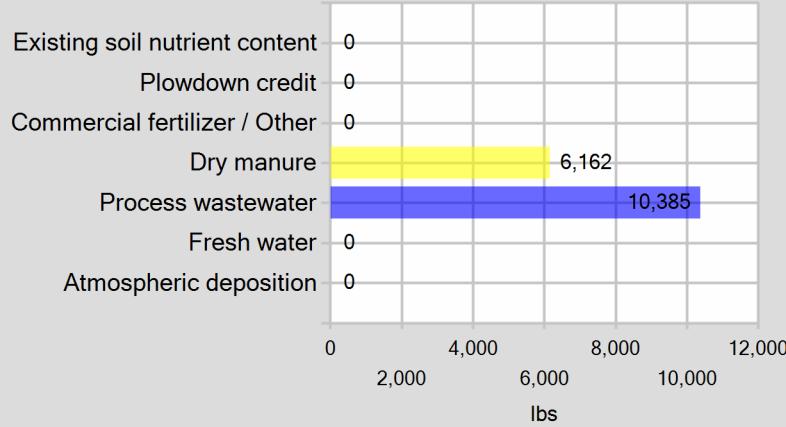
Pounds of nitrogen applied



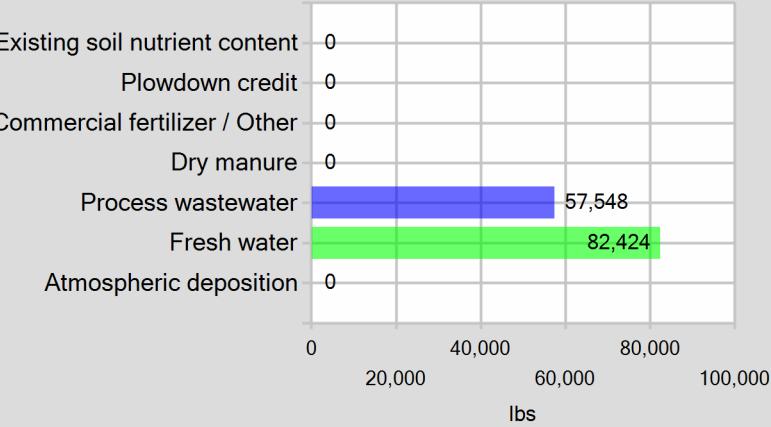
Pounds of phosphorus applied



Pounds of potassium applied



Pounds of salt applied



Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

EXCEPTION REPORTING

A. MANURE, PROCESS WASTEWATER, AND OTHER DAIRY WASTE DISCHARGES

The following is a summary of all manure and process wastewater 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 wastewater discharges occurred during the reporting period.

B. STORM WATER DISCHARGES

The following 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 stormwater discharges occurred during the reporting period.

C. LAND APPLICATION AREA TO SURFACE WATER DISCHARGES

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

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

NUTRIENT MANAGEMENT PLAN AND EXPORT AGREEMENT STATEMENTS

A. NUTRIENT MANAGEMENT PLAN STATEMENTS

Was the facility's NMP updated in the reporting period? Yes _____

Was the facility's NMP developed by a certified nutrient management planner (specialist) as specified in Attachment C of the General Order? Yes _____

Was the facility's NMP approved by a certified nutrient management planner (specialist) as specified in Attachment C of the General Order? Yes _____

B. EXPORT AGREEMENT STATEMENT

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

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

ADDITIONAL NOTES

A. NOTES

Irrigation Well #1 still down.

Wells were turned off for the season.

Canal water became available.

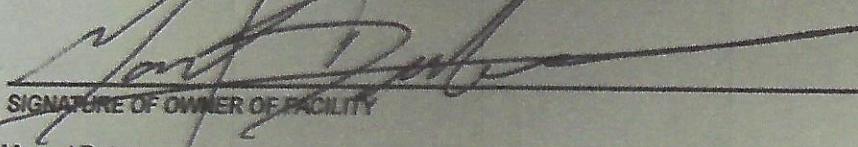
Well 2 was turned off before sampled. Using 2022 lab.

Annual Report - General Order No. R5-2007-0035
Reporting period 01/01/2023 to 12/31/2023.

CERTIFICATION

A. OWNER AND/OR OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in 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.


SIGNATURE OF OWNER OF FACILITY

Manuel Dutra

PRINT OR TYPE NAME

10-29-24

Same

SIGNATURE OF OPERATOR OF FACILITY

SAME AS OWNER

PRINT OR TYPE NAME

10-29-24

DATE

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

ATTACHMENTS

A. REQUIRED ATTACHMENTS

The following lists the required documents that should be attached to the Annual Report when submitted .

Annual Dairy Facility Assessment

Provide an Annual Dairy Facility Assessment (an update to the Preliminary Dairy Facility Assessment in Attachment A) for each reporting period. On the PDFA Final page, click on the ADFA Report button to generate an ADFA report after updating information as needed.

Manure/Process Wastewater Tracking Manifests

Provide copies of all manure/process wastewater tracking manifests for the reporting period, signed by both the owner/operator and the hauler.

Corrective Actions Documents

Provide records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements of the General Order. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction.

Groundwater Monitoring

Dischargers that monitor supply wells or subsurface (tile) drainage systems, or that have monitoring well systems must submit monitoring results as directed in the General Order, Groundwater Reporting Section starting on page MRP-13.

Storm Water Monitoring

Dischargers that are required to monitor storm water more frequently than required in the General Order must submit monitoring results as directed in the General Order, Storm Water Reporting Section on page MRP-14.

Report of Dairy Canal Water Analysis

Dutra & Dutra Dairy
7680 5th Avenue
Hanford CA 93230
00-0016607 08

Lab No.: 23I0730
Sampled By: Marty Verhoeven
Requested By: Marty Verhoeven
Submitted Date: 09/11/23
Reported Date: 09/18/23
Project:
Crop ID:

E-mail: martyverhoeven@gmail.com
Copy To:

	Date Sampled	Time Sampled	EC $\mu\text{mhos/cm}$	EC mmhos/cm	NO ₃ -N mg/L	TDS mg/L
1	Canal (Standpipe)	9/11/23	4:17	20	0.02	ND

ND = None Detected

Approved By: Scott M. Friedland
Laboratory Director\Technical Manager
ELAP Certification #1595
A2LA Certification #6440.02



09/11/23 14:30

23I0730

9

WATER WORK REQUEST

Acct No.

16607

Cons.

08

Purchase Order No.

Results Needed By

Client _____
Address _____
City, State, Zip _____
Email: _____**Dutra & Dutra Dairy**

7680 5th Avenue

Hanford, CA 93230

Copy to: martyverhoeven@gmail.com

Requested by/Cell: Marty Verhoeven/ 559-410-2420

Facility: _____

Date sampled 9-11-23

Sampled by *mver* QA/QC Document Copy of Chain RWQCB**DESCRIPTION OF SAMPLES**1. *Cowsl*Sampled From: *Stompyja*

2.

Sampled From: _____

3.

Sampled From: _____

4.

Sampled From: _____

5.

Sampled From: _____

6.

Sampled From: _____

7.

Sampled From: _____

8.

Sampled From: _____

9.

Sampled From: _____

10.

Sampled From: _____

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	<i>Mver</i>	100%	9-11-23 4:12	9-11-23 8:10 AM
Second	<i>Marty Verhoeven</i>	OU	9-11-23 8:10 AM	9-11-23 11:44
Third	<i>GJ</i>	DYF	9-11-23 11:44	9-11-23 2:08
Fourth	<i>GJ</i>	OU	9-11-23 16:30	

I guarantee that as the client, or on behalf of the client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorney's fees.

If payment is not made when due and a legitimate dispute exists concerning the product or services of DellaValle Laboratory, Inc., it will be submitted to mediation under the Rules and Procedures of Creative Alternative to Litigation, Inc. (CAL). If the dispute is not resolved in mediation, then the dispute will be submitted to binding arbitration through CAL under its Rules and Procedure. The parties will equally bear the costs of mediation/arbitration. If, however, the mediator declares that no legitimate dispute exists, then client will pay all mediation and arbitration costs, and in the event of arbitration, reasonable attorney's fees of DellaValle Laboratory.

Invoicing Information:**Price List 2022-23**

Sampling Hrs	Miles	Consulting	Shipping	\$	In
				\$	Out

Amt Paid Rec By Check No. Date

Signature _____

Sample received in cooler with ice?

[] Yes [] No

ctt:update 2020

Report of Dairy Well Water Analysis

Dutra & Dutra Dairy
7680 5th Avenue
Hanford CA 93230
00-0016607 08

Lab No.: 23L0254
Sampled By: Pamela Verhoeven
Requested By: Marty Verhoeven
Submitted Date: 12/06/23
Reported Date: 12/19/23
Project:
Crop ID:

E-mail: martyverhoeven@gmail.com

Copy To:

	Date Sampled	Time Sampled	EC <small>μmhos/cm</small>	EC <small>mmhos/cm</small>	NO ₃ -N <small>mg/L</small>	NH ₄ -N <small>mg/L</small>	Field NH ₄ -N <small>mg/L</small>	Total NH ₄ -N <small>mg/L</small>	TDS <small>mg/L</small>	CO ₃ as CaCO ₃ <small>mg/L</small>		HCO ₃ as CaCO ₃ <small>mg/L</small>		Cl <small>mg/L</small>	SO ₄ <small>mg/L</small>	Ca <small>mg/L</small>	Mg <small>mg/L</small>	Na <small>mg/L</small>	pH at 25°C
1	Domestic (Valve @ Well)	12/05/23	13:40	586	0.59	3.8	*		320	ND	127	59.5	37.4	21.6	1.4	98	7.6		

* = Field NH₄-N not Taken.

ND = None Detected

Approved By:

Deora M. Friedland

Laboratory Director\Technical Manager

ELAP Certification #1595

A2LA Certification #6440.02

Report of Dairy Well Water Analysis

Dutra & Dutra Dairy
7680 5th Avenue
Hanford CA 93230
00-0016607 08

Lab No.: 22F2063
Sampled By: M. Verhoeven
Requested By:
Submitted Date: 06/28/22
Reported Date: 07/05/22
Project:
Crop ID:

E-mail: martyverhoeven@gmail.com
Copy To:

	Date Sampled	Time Sampled	EC <small>μmhos/cm</small>	EC <small>mmhos/cm</small>	NO ₃ -N <small>mg/L</small>	Field NH ₄ -N <small>mg/L</small>	Total NH ₄ -N <small>mg/L</small>	TDS <small>mg/L</small>	CO ₃ as CaCO ₃ <small>mg/L</small>		HCO ₃ as CaCO ₃ <small>mg/L</small>		Cl <small>mg/L</small>	SO ₄ <small>mg/L</small>	Ca <small>mg/L</small>	Mg <small>mg/L</small>	Na <small>mg/L</small>	pH at 25°C
1	Well #2 (Standpipe)	6/27/22	14:25	529	0.53	0.5	ND	290	17	73.6	89	29.2	8.2	0.2	102	8.9		

* = Field NH₄-N not Taken.

ND = None Detected

Approved By:

Laboratory Director\Technical Manager

ELAP Certification #1595

A2LA Certification #6440.02



06/28/22 07:00

22F2063

WATER WORK REQUEST

Bill To:	Acct No. 16607	Cons. 08	No. of Samples 1	No. Bottles 1
Purchase Order No.	Results Needed By			
Client Dutra & Dutra Dairy	Address 7680 5th Avenue	City, State, Zip Hanford, CA 93230	Water Type:	<input type="checkbox"/> Drinking <input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Supply Water <input type="checkbox"/> Other
Address 0				<input type="checkbox"/> Wastewater <input type="checkbox"/> Mon. Well
Copy to: martyverhoeven@gmail.com				
Requested by/Cell: Marty Verhoeven/ 559-410-2420				
Facility: 0				
Date sampled 6-27-22				
Sampled by Marty Verhoeven				
<input checked="" type="checkbox"/> QA/QC Document <input checked="" type="checkbox"/> Copy of Chain <input type="checkbox"/> RWQCB				

DESCRIPTION OF SAMPLES

1. **Well #2** Sampled From: **Strainer**
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Date Sampled	Time Sampled	Field NH4-N (mg/L)	Received Temp °C
6-27-22	225	0	16.3
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	Marty Verhoeven	VFC	6-27-22	6-27-22 3:58pm
Second	YR	DLI	6-27-22 3:58pm	
Third	Marty Verhoeven	PM&S	6-27-22 4:00pm	
Fourth	Marty Verhoeven	PM&S	6-27-22 4:00pm	

I guarantee that as the client, or on behalf of the client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorney's fees. It is understood that payment is expected to be made with samples unless terms have been previously arranged. Terms are net 30 days; overdue accounts will be charged a delinquent fee of 2% per month (annually 24%) or \$5.00 per month whichever is greater. If payment is not made when due and a legitimate dispute exists concerning the product or services of Dellavalle Laboratory, Inc., it will be submitted to mediation under the Rules and Procedures of Creative Alternative to Litigation, Inc. (cal). If the dispute is not resolved in mediation, then arbitration will be submitted to binding arbitration through cal under its Rules and Procedures. The parties will equally bear the costs of mediation/arbitration. If, however, the mediator declares that no legitimate dispute exists, then debtor will pay all mediation and arbitration costs, and in the event of arbitration, reasonable attorney's fees of Dellavalle Laboratory.

Invoicing Information:**Price List 2022**

Sampling Hrs	Miles	Consulting	Shipping	\$	In
_____	_____	_____	_____	_____	Out
Amt Paid	Rec By	Check No.	Date	_____	_____

Signature _____

Sample received in cooler with ice?

[] Yes [] No

v1.0 update 2020