

# **2023 ANNUAL REPORT**

Prepared for

## **MS Monteiro Dairy**

3515 Ave 228  
Tulare CA 93274

Tulare County

January 01 through December 31, 2023

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Prepared by:



130 N. Garden Street  
Visalia, CA 93291-6263  
Phone: (559) 636-1166  
Fax: (559) 636-1177  
[www.ppeng.com](http://www.ppeng.com)

**2023 ANNUAL REPORT****MS Monteiro Dairy****Designated Person(s) Accountable for the Annual Report****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.*

Dairy Owner

Signature: \_\_\_\_\_

Print: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

 Dairy Operator  
Owner is also the OperatorSignature: Manuel MonteiroPrint: Manuel MonteiroTitle: OwnerDate: 6-21-2024**Facility Configuration Changes or Information about this Report**

Nothing significant to report

This report contains information required to be submitted as outlined by the Annual Reporting section of the Revised Monitoring and Reporting Program No. R5-2013-0122 (pages MRP-12 through 14) for this dairy facility. This report is due by July 01 following the reporting year.

## I. General Section

### 1. Reporting Period

This Annual Monitoring Report contains the required information for the period of January 01 through December 31. Field data contains information pertaining to crop activities for all crops harvested within this period. This allows for continuity of the winter crops.

### 2. Herd Profile and Housing of the Dairy

The maximum and average number and type of animals, whether in open confinement or housed under roof is provided in Attachment A.

### 3. Estimated Amount of Total Manure, Process Water, and Nutrients Generated

The estimated total amount of manure and process wastewater generated for this period is provided in Attachment A.

### 4. Estimated Amount of Total Manure, Process Water, and Nutrients Applied

The estimated total amount of manure and process wastewater applied for this period is provided in Attachment A.

Individual applications to each field (Item 17, Record Keeping) is provided in Attachment E.

### 5. Ratio of Total Nitrogen Applied to Removed for Land Application Areas

The ratio of total nitrogen (inorganic & organic) applied to land application areas and the total nitrogen removed by crop harvest is provided in Attachment C.

Also provided is the Plant Available Nitrogen (PAN) ratio which includes the inorganic nitrogen and calculates how much of the organic nitrogen has become available to the plant through mineralization for that crop. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

### 6. Estimated Amount of Total Manure, Process Water, and Nutrients Transferred

The estimated total amount of manure and process wastewater transferred offsite for this period is provided in Attachment A.

Individual transfers are documented in Attachment G.

Transfer documentation can be found in Item 13, Manure Tracking Manifests.

### 7. Land Application Areas Without Manure Applications

The total number of acres and APN's for all land application areas that did not receive manure applications during the period is provided in Attachment B.

### 8. Land Application Areas With Manure Applications

The total number of acres and APN's for all land application areas that did receive manure applications during the period is provided in Attachment B.

**9. Summary of Manure and Process Wastewater Discharges from the Production Area**

A summary of all manure and 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 that occurred during the reporting period is provided.

- No discharges occurred during the reporting period.
- Yes, \_\_\_\_\_ discharges occurred. (See Attachment for detailed reports.)

**10. Summary of Storm Water Discharges from the Production Area**

A summary of all storm water discharges from the production areas to surface water during the reporting period is provided.

- No discharges occurred during the reporting period.
- Yes, \_\_\_\_\_ discharges occurred. (See Attachment for detailed reports.)

**11. Summary of Discharges from the Land Application Area(s)**

A summary of all discharges from land application area to surface water that have occurred during the reporting period is provided.

- No discharges occurred during the reporting period.
- Yes, \_\_\_\_\_ discharges occurred. (See Attachment for detailed reports.)

**12. Nutrient Management Plan Update**

## 12.1 Was the facility's NMP updated in the reporting period?

- No.
- Yes.

## 12.2 Was the facility's NMP developed and certified by a certified nutrient management specialist?

- No.
- Yes.

**13. Manure/Process Wastewater Tracking Manifests**

Solid, slurry, or process wastewater that is sold, given away, or otherwise removed from the facility is documented on a manifest.

- No transfers occurred.
- Yes, attached are the manure and/or wastewater tracking manifests (See Attachment D's as titled by R5-2007-0035 Attachment D).

**14. Written Agreements**

Any process wastewater transferred to a third party must have a written agreement consistent with the Regional Board requirements. Any new agreements within the reporting period must be submitted.

- No wastewater agreements for this facility.
- There are \_\_\_\_\_ current wastewater agreements for this facility.
- There are \_\_\_\_\_ new agreements this reporting period and are attached.

**15. Laboratory Analysis for Discharges**

Laboratory analysis chain-of-custody forms and laboratory quality assurance/quality control documentation of all discharges described in Items #9, #10 and/or #11 are in the reports provided in Attachment J.

**16. Tabulated Nutrient Analytical Data**

Analytical data for samples of manure, process wastewater, irrigation water, soil and plant tissue are tabulated in Attachment H.

**17. Record-Keeping Results**

- 17.1 Response of Item B.2.b and B.3.l. Corrective Action records to correct deficiencies of inspections from the production and land application areas.
- No corrective actions during the reporting period.  
 Yes, \_\_\_\_\_ corrective actions. (See Attachment K for detailed reports.)
- 17.2 Response of Item B.2.c. Records of production area overflow are in reports provided in Attachment J.
- 17.3 Response of Items B.3.a and b. See Attachment D for field acres, crops, planting dates, expected yields, and harvest information.
- 17.4 Response of Item B.3.c, d and j. See Attachment E for field applications of solid and liquid manure and the total amount of nutrients applied.
- 17.5 Response of Item B.3.e. See Attachment F for weather conditions before, during, and after manure applications.

**II. Groundwater Reporting Section****1. Supply Wells and Tile Drainage System Monitoring**

Water supply wells and/or subsurface (tile) drainage systems laboratory data including chain-of-custody and laboratory quality assurance/quality control documentation are attached.

**2. Groundwater Monitoring Well Systems**

- This facility does not have groundwater monitoring wells.  
 This facility has groundwater monitoring wells required by the Regional Board and a certified report is attached.  
 This facility has groundwater monitoring wells required by the County and the sampling requirements are attached.  
 This facility has groundwater monitoring wells for research purposes. Data is exempt from this report.

**III. Storm Water Reporting Section****1. Storm Water Discharges from Land Application Area**

A summary of all storm water discharges from the land application areas during the reporting period is provided including laboratory analysis chain-of-custody forms and laboratory quality assurance/quality control documentation

- No discharges occurred during the reporting period.  
 Yes, \_\_\_\_\_ discharges occurred. (See Attachment J for detailed reports.)

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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Attachment A

**Herd Profile, Housing, and Estimated Total Manure Production**

(Ref MRP Annual Report, General Section, Items 3 and 4)

Average Herd Profile and Housing Type

Type of Animals	Average Open Confinement	Average Housed Under Roof	Max Open Confinement	Max Housed Under Roof	Average Live Weight	Average Milk Production (lbs/cow/day)	Predominant Breed
Milk Cows	891	424	905	424	1,400	80.0	Holstein
Dry Cows	180	0	183	0	1,600		Holstein
Bred Heifers 15-24 Months	643	0	653	0	1,160		Holstein
Heifers 7-14 Months	514	0	523	0	685		Holstein
Calves 4-6 Months	193	0	196	0			Holstein
Calves 0-3 Months	0	0	0	0			Holstein
Other type of commercial animals							

Number of months the dairy was occupied: 12

Dairy Name: MS Monteiro & Sons Dairy

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Tulare, CA 93274

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Estimated Total Amount of Manure and Nutrients Based On Average Herd Size

Type of Animals	Total Manure (lbs/day)	Nitrogen (lbs/day)	Phosphorus (lbs/day)	Potassium (lbs/day)
Milk Cows	24,809	1,264	215	280
Dry Cows	1,980	90	12	59
Bred Heifers 15-24 Months	6,173	244	35	
Heifers 7-14 Months	3,058	106	17	
Calves 4-6 Months	603	25	4	
Calves 0-3 Months	0	0	0	
Other type of commercial animals				
<b>Total Pounds for report period:</b>		631,094	103,155	123,769
<b>Total tons for report period:</b>	6,684			

Notes:

1. Equations and factors used in this table to determine total manure, nitrogen, phosphorus and potassium were obtained from ASAE D384.2 March 2005.
2. The quantities presented in this table include both solid and liquid excretions and do not account for any losses or division into solid or liquid portions.

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Estimated Total Amount of Solid Manure and Nutrients Generated

Total Tons (As Is) of Manure Generated	Total Ibs Generated				
	Total Dry Manure	Nitrogen	Phosphorus	Potassium	Salt
1,525	2,016,050	34,474	9,274	8,266	449,579

Estimated Total Amount of Process Wastewater and Nutrients Generated

Total Gallons of Process Wastewater Generated (1,000 gals.)	Total Ibs Generated			
	Nitrogen	Phosphorus	Potassium	Salt
15,300	49,565	8,912	56,378	251,444

Notes:

1. Generated totals are the sum of what was applied to all land application areas and what was transferred to others. See Attachment E for individual field applications and Attachment G for individual transfers.

2. Dry tons are calculated by:

$$\text{Dry Tons} = \text{Tons As-Is} * (100\text{-sample moisture \%}) / 100$$

3. Solid manure nutrient pounds applied are calculated by:

$$\text{Total (N,P,K,Salts) lbs} = (\text{Dry Tons}) * ((\%N,P,K,Ash)/100) * 2,000$$

4. Process wastewater nutrient pounds applied are calculated by:

$$\text{Total (P,K,Salts) lbs} = (\text{Gallons}) * (P,K,TDS mg/l) * (8.337E-06)$$

$$\text{Total (N) lbs} = (\text{Gallons}) * (NO_3-N + TKN mg/l) * (8.337E-06)$$

5. All solid manure applied is considered as the organic form of nitrogen. Inorganic and organic forms of nitrogen in process wastewater are calculated by:

$$\text{Inorganic N lbs} = (\text{Gallons}) * (NO_3-N + NH_4-N mg/l) * (8.337E-06)$$

$$\text{Organic N lbs} = (\text{Gallons}) * (TKN-NH_4-N mg/l) * (8.337E-06)$$

6. Estimated total salt content in solid manure is determined by fixed solids (ash) and in process wastewater by total dissolved solids. These are not direct relationships but are being used for estimation purposes. Ash can vary widely in a sample if corral dirt becomes part of the sample. Also, ash content is only required to be analyzed once every two years. The latest resultant value is applied to any subsequent applications.

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Estimated Amount of Total Solid Manure And Nutrients Applied

Total Tons (As Is) of Manure Applied	Total lbs Applied				
	Manure	Nitrogen	Phosphorus	Potassium	Salt
1,525	2,016,050	34,474	9,274	8,266	449,579

Estimated Amount of Total Wastewater And Nutrients Applied

Total Gallons of Process Wastewater Applied (1,000 gals.)	Total lbs Applied			
	Nitrogen	Phosphorus	Potassium	Salts
15,300	49,565	8,912	56,378	251,444

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Estimated Amount of Total Solid Manure And Nutrients Transferred

Total Tons (As Is) of Manure Transferred	Total Ibs Transferred				
	Total Manure	Nitrogen	Phosphorus	Potassium	Salt
0	0	0	0	0	0

Estimated Amount of Total Wastewater And Nutrients Transferred

Total Gallons Process Wastewater Transferred (1,000 gal)	Total Ibs Transferred			
	Nitrogen	Phosphorus	Potassium	Salts
0	0	0	0	0

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**Report Period:** Jan 01 through Dec 31, 2023

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Attachment B

**Land Application Area**

(Ref MRP Annual Report, General Section, Items 7 and 8)

**All APNs Associated With This Dairy**

Total Number of APN Acres Associated with this Dairy: 754.17

APN	County	Acres	Land Use	APN Not Part of Land Application Area
155-040-001	Tulare	146.10	Cropland	
155-050-006	Tulare	20.00	Cropland	
155-050-011	Tulare	18.19	Cropland	
155-070-006	Tulare	39.15	Cropland	
155-070-016	Tulare	15.60	Cropland	
155-080-004	Tulare	40.00	Cropland	
155-080-011	Tulare	79.19	Dairy Site/Cropland	
155-090-009	Tulare	35.50	Cropland	
155-100-002	Tulare	80.00	Cropland	
155-100-003	Tulare	160.00	Cropland	
158-030-009	Tulare	39.44	Cropland	
158-120-016	Tulare	81.00	Cropland	

**Total Land Application Areas For Manure And Wastewater**

Total Land Application Area Acres: 705.0

Total Acres With Manure Applied For This Report: 390.0

Total Acres Without Manure Applied For This Report: 315.0

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Field ID	Acres	APN	Type of Waste Applied For This Report	Field Not Part of Land Application Area
1-01	35.0	155-080-011	Liquid	
1-02	40.0	155-050-006 155-050-011	Liquid	
1-03	35.0	155-090-009	Liquid	
1-04	40.0	155-070-006	Liquid	
1-05	110.0	155-040-001	Solid	
1-06	35.0	155-040-001	Solid	
1-07	35.0	155-100-003	None	
1-08	40.0	155-100-003	None	
1-09	40.0	155-100-003	None	
1-10	40.0	155-100-003	None	
1-11	40.0	158-030-009	Solid	
1-12	15.0	155-070-016	Liquid	
1-22	80.0	158-120-016	None	
1-28	40.0	155-080-004	Liquid	
1-30	80.0	155-100-002	None	

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Attachment C  
**Nitrogen Balance Ratio - Applied to Removed**  
(Nitrogen values presented as lbs/acre)

<b>Field Information</b>		
Field ID	1-01	1-01
Crop	Wheat Silage	Corn Silage
Expected Yield (tons/ac)	20	30
Acres	35	35
Start Date	10/28/2022	6/30/2023
<b>Applications</b>		
Commercial		100
Solid Manure		
Total Applied		
PAN Applied	5	3
Lagoon Water		
Total Applied	194	138
PAN Applied	122	124
Irrigation Source	4	10
Atmospheric	7	7
<b>Removal</b>		
Planned Harvest		
Actual Harvest	182	324
<b>Balance Ratio</b>		
By Crop		
Total	1.12	0.79
PAN	0.76	0.75
By Field		
Total	0.91	0.91
PAN	0.75	0.75
By Farm		
Total	1.11	1.11
PAN	1.05	1.05

**Notes:**

Total Balance Ratio is based on the total nitrogen (inorganic & organic) applied only during the time of that crop's growing season.

PAN Balance Ratio is based on Plant Available Nitrogen. In addition to inorganic nitrogen applied, PAN takes into consideration how much of the organic nitrogen has become available to the plant through mineralization. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

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Attachment C  
**Nitrogen Balance Ratio - Applied to Removed**  
(Nitrogen values presented as lbs/acre)

<b>Field Information</b>		
Field ID	<b>1-02</b>	<b>1-02</b>
Crop	<b>Wheat Silage</b>	<b>Corn Silage</b>
Expected Yield (tons/ac)	20	30
Acres	40	40
Start Date	10/18/2022	5/31/2023
<b>Applications</b>		
Commercial		100
Solid Manure		
Total Applied		
PAN Applied	5	3
Lagoon Water		
Total Applied	170	153
PAN Applied	109	133
Irrigation Source	93	137
Atmospheric	7	7
<b>Removal</b>		
Planned Harvest		
Actual Harvest	203	324
<b>Balance Ratio</b>		
By Crop		
Total	1.33	1.22
PAN	1.06	1.17
By Field		
Total	1.26	1.26
PAN	1.13	1.13
By Farm		
Total	1.11	1.11
PAN	1.05	1.05

**Notes:**

Total Balance Ratio is based on the total nitrogen (inorganic & organic) applied only during the time of that crop's growing season.

PAN Balance Ratio is based on Plant Available Nitrogen. In addition to inorganic nitrogen applied, PAN takes into consideration how much of the organic nitrogen has become available to the plant through mineralization. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

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Attachment C  
**Nitrogen Balance Ratio - Applied to Removed**  
(Nitrogen values presented as lbs/acre)

<b>Field Information</b>		
Field ID	<b>1-03</b>	<b>1-03</b>
Crop	<b>Wheat Silage</b>	<b>Corn Silage</b>
Expected Yield (tons/ac)	20	30
Acres	35	35
Start Date	10/17/2022	6/01/2023
<b>Applications</b>		
Commercial		100
Solid Manure		
Total Applied		
PAN Applied	5	3
Lagoon Water		
Total Applied	49	174
PAN Applied	12	128
Irrigation Source	116	9
Atmospheric	7	7
<b>Removal</b>		
Planned Harvest		
Actual Harvest	170	303
<b>Balance Ratio</b>		
By Crop		
Total	1.01	0.96
PAN	0.83	0.81
By Field		
Total	0.98	0.98
PAN	0.82	0.82
By Farm		
Total	1.11	1.11
PAN	1.05	1.05

**Notes:**

Total Balance Ratio is based on the total nitrogen (inorganic & organic) applied only during the time of that crop's growing season.

PAN Balance Ratio is based on Plant Available Nitrogen. In addition to inorganic nitrogen applied, PAN takes into consideration how much of the organic nitrogen has become available to the plant through mineralization. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

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Attachment C  
**Nitrogen Balance Ratio - Applied to Removed**  
(Nitrogen values presented as lbs/acre)

<b>Field Information</b>		
Field ID	<b>1-04</b>	<b>1-04</b>
Crop	<b>Wheat Silage</b>	<b>Corn Silage</b>
Expected Yield (tons/ac)	20	30
Acres	40	40
Start Date	11/01/2022	5/22/2023
<b>Applications</b>		
Commercial		100
Solid Manure		
Total Applied		
PAN Applied	2	3
Lagoon Water		
Total Applied	127	32
PAN Applied	88	62
Irrigation Source	109	109
Atmospheric	7	7
<b>Removal</b>		
Planned Harvest		
Actual Harvest	176	227
<b>Balance Ratio</b>		
By Crop		
Total	1.39	1.09
PAN	1.17	1.24
By Field		
Total	1.22	1.22
PAN	1.21	1.21
By Farm		
Total	1.11	1.11
PAN	1.05	1.05

**Notes:**

Total Balance Ratio is based on the total nitrogen (inorganic & organic) applied only during the time of that crop's growing season.

PAN Balance Ratio is based on Plant Available Nitrogen. In addition to inorganic nitrogen applied, PAN takes into consideration how much of the organic nitrogen has become available to the plant through mineralization. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

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Attachment C

**Nitrogen Balance Ratio - Applied to Removed**

(Nitrogen values presented as lbs/acre)

<b>Field Information</b>		
Field ID	1-05	1-05
Crop	Wheat Silage	Corn Silage
Expected Yield (tons/ac)	20	30
Acres	110	110
Start Date	10/29/2022	6/03/2023
<b>Applications</b>		
Commercial		100
Solid Manure		
Total Applied	195	
PAN Applied	90	108
Lagoon Water		
Total Applied		
PAN Applied		
Irrigation Source	0	165
Atmospheric	7	7
<b>Removal</b>		
Planned Harvest		
Actual Harvest	168	231
<b>Balance Ratio</b>		
By Crop		
Total	1.21	1.18
PAN	0.58	1.64
By Field		
Total	1.19	1.19
PAN	1.20	1.20
By Farm		
Total	1.11	1.11
PAN	1.05	1.05

**Notes:**

Total Balance Ratio is based on the total nitrogen (inorganic & organic) applied only during the time of that crop's growing season.

PAN Balance Ratio is based on Plant Available Nitrogen. In addition to inorganic nitrogen applied, PAN takes into consideration how much of the organic nitrogen has become available to the plant through mineralization. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

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Attachment C  
**Nitrogen Balance Ratio - Applied to Removed**  
(Nitrogen values presented as lbs/acre)

<b>Field Information</b>		
	<b>1-06</b> <b>Wheat Silage</b>	<b>1-06</b> <b>Corn Silage</b>
Field ID		
Crop		
Expected Yield (tons/ac)	20	30
Acres	35	35
Start Date	10/30/2022	6/13/2023
<b>Applications</b>		
Commercial		100
Solid Manure		
Total Applied	113	
PAN Applied	71	73
Lagoon Water		
Total Applied		
PAN Applied	0	1
Irrigation Source	74	196
Atmospheric	7	7
<b>Removal</b>		
Planned Harvest		
Actual Harvest	168	242
<b>Balance Ratio</b>		
By Crop		
Total	1.16	1.25
PAN	0.91	1.55
By Field		
Total	1.21	1.21
PAN	1.29	1.29
By Farm		
Total	1.11	1.11
PAN	1.05	1.05

**Notes:**

Total Balance Ratio is based on the total nitrogen (inorganic & organic) applied only during the time of that crop's growing season.

PAN Balance Ratio is based on Plant Available Nitrogen. In addition to inorganic nitrogen applied, PAN takes into consideration how much of the organic nitrogen has become available to the plant through mineralization. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

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Attachment C

**Nitrogen Balance Ratio - Applied to Removed**

(Nitrogen values presented as lbs/acre)

<b>Field Information</b>	
Field ID	1-09
Crop	Pistachios
Expected Yield (tons/ac)	0
Acres	40
Start Date	1/01/2023
<b>Applications</b>	
Commercial	
Solid Manure	
Total Applied	
PAN Applied	3
Lagoon Water	
Total Applied	
PAN Applied	2
Irrigation Source	0
Atmospheric	14
<b>Removal</b>	
Planned Harvest	
Actual Harvest	
<b>Balance Ratio</b>	
By Crop	
Total	14.00
PAN	19.01
By Field	
Total	14.00
PAN	19.01
By Farm	
Total	1.11
PAN	1.05

**Notes:**

Total Balance Ratio is based on the total nitrogen (inorganic & organic) applied only during the time of that crop's growing season.

PAN Balance Ratio is based on Plant Available Nitrogen. In addition to inorganic nitrogen applied, PAN takes into consideration how much of the organic nitrogen has become available to the plant through mineralization. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

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Attachment C  
**Nitrogen Balance Ratio - Applied to Removed**  
(Nitrogen values presented as lbs/acre)

Field Information		
Field ID	1-11	1-11
Crop	Wheat Silage	Corn Silage
Expected Yield (tons/ac)	20	30
Acres	40	40
Start Date	10/25/2022	6/02/2023
Applications		
Commercial		100
Solid Manure		
Total Applied	226	
PAN Applied	96	110
Lagoon Water		
Total Applied		
PAN Applied		
Irrigation Source	20	142
Atmospheric	7	7
Removal		
Planned Harvest		
Actual Harvest	224	227
Balance Ratio		
By Crop		
Total	1.13	1.10
PAN	0.55	1.59
By Field		
Total	1.11	1.11
PAN	1.07	1.07
By Farm		
Total	1.11	1.11
PAN	1.05	1.05

**Notes:**

Total Balance Ratio is based on the total nitrogen (inorganic & organic) applied only during the time of that crop's growing season.

PAN Balance Ratio is based on Plant Available Nitrogen. In addition to inorganic nitrogen applied, PAN takes into consideration how much of the organic nitrogen has become available to the plant through mineralization. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Attachment C  
**Nitrogen Balance Ratio - Applied to Removed**  
(Nitrogen values presented as lbs/acre)

<b>Field Information</b>		
	<b>1-12</b> <b>Wheat Silage</b>	<b>1-12</b> <b>Corn Silage</b>
Field ID		
Crop		
Expected Yield (tons/ac)	20	30
Acres	15	15
Start Date	10/03/2022	5/25/2023
<b>Applications</b>		
Commercial		100
Solid Manure		
Total Applied		
PAN Applied	6	4
Lagoon Water		
Total Applied	98	102
PAN Applied	81	97
Irrigation Source	3	7
Atmospheric	7	7
<b>Removal</b>		
Planned Harvest		
Actual Harvest	228	176
<b>Balance Ratio</b>		
By Crop		
Total	0.48	1.23
PAN	0.42	1.23
By Field		
Total	0.80	0.80
PAN	0.77	0.77
By Farm		
Total	1.11	1.11
PAN	1.05	1.05

**Notes:**

Total Balance Ratio is based on the total nitrogen (inorganic & organic) applied only during the time of that crop's growing season.

PAN Balance Ratio is based on Plant Available Nitrogen. In addition to inorganic nitrogen applied, PAN takes into consideration how much of the organic nitrogen has become available to the plant through mineralization. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Attachment C

**Nitrogen Balance Ratio - Applied to Removed**

(Nitrogen values presented as lbs/acre)

<b>Field Information</b>		
Field ID	1-28	1-28
Crop	Wheat Silage	Corn Silage
Expected Yield (tons/ac)	20	30
Acres	40	40
Start Date	10/20/2022	6/08/2023
<b>Applications</b>		
Commercial		
Solid Manure		
Total Applied		
PAN Applied	3	5
Lagoon Water		
Total Applied	149	49
PAN Applied	94	64
Irrigation Source	109	145
Atmospheric	7	7
<b>Removal</b>		
Planned Harvest		
Actual Harvest	210	146
<b>Balance Ratio</b>		
By Crop		
Total	1.26	1.38
PAN	1.02	1.51
By Field		
Total	1.31	1.31
PAN	1.22	1.22
By Farm		
Total	1.11	1.11
PAN	1.05	1.05

**Notes:**

Total Balance Ratio is based on the total nitrogen (inorganic & organic) applied only during the time of that crop's growing season.

PAN Balance Ratio is based on Plant Available Nitrogen. In addition to inorganic nitrogen applied, PAN takes into consideration how much of the organic nitrogen has become available to the plant through mineralization. This includes both what is applied during that growing season and the residual amounts from previous applications to that field.

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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Attachment D  
**Results of Record-Keeping Requirements**  
**Planting and Harvest Data**

(Ref MRP Annual Report, General Section, Item 17, subitems B.3 a and b)

\* - A crop's planting date is reported in the harvest year with the yield of that crop.

\*\* - If no manure is applied to the crop within the year, harvest is not reported (See Attachment E).

\*\*\* - For multiple year crops, a starting date is set to increment into annual periods.

Crops and Harvests

Field ID	Crop	Acres	Plant Date *	Multi Year Crop ***	Harvest Date **	Yield (tons/acre)		Total Tons
						Expected	Actual	
1-01	Wheat Silage	35.00	10/28/2022		05/02/2023	20	20.00	700
1-01	Corn Silage	35.00	06/30/2023		10/18/2023	30	28.00	980
1-02	Wheat Silage	40.00	10/18/2022		04/21/2023	20	20.00	800
1-02	Corn Silage	40.00	05/31/2023		09/08/2023	30	28.00	1,120
1-03	Wheat Silage	35.00	10/17/2022		04/20/2024	20	20.00	700
1-03	Corn Silage	35.00	06/01/2023		09/19/2023	30	28.00	980
1-04	Wheat Silage	40.00	11/01/2022		05/05/2023	20	20.00	800
1-04	Corn Silage	40.00	05/22/2023		09/09/2023	30	28.00	1,120
1-05	Wheat Silage	110.00	10/29/2022		05/02/2023	20	20.00	2,200
1-05	Corn Silage	110.00	06/03/2023		09/21/2023	30	28.00	3,080
1-06	Wheat Silage	35.00	10/30/2022		05/03/2023	20	20.00	700
1-06	Corn Silage	35.00	06/13/2023		10/01/2023	30	28.00	980
1-09	Pistachios	40.00	01/01/2023			0		
1-11	Wheat Silage	40.00	10/25/2022		04/28/2023	20	20.00	800
1-11	Corn Silage	40.00	06/02/2023		09/20/2023	30	28.00	1,120
1-12	Wheat Silage	15.00	10/03/2022		04/06/2023	20	20.00	300
1-12	Corn Silage	15.00	05/25/2023		09/12/2023	30	28.00	420
1-28	Wheat Silage	40.00	10/20/2022		04/23/2023	20	20.00	800
1-28	Corn Silage	40.00	06/08/2023		09/12/2023	30	28.00	1,120

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Nutrients Removed

Field ID	Crop	Harvest Date	Total Tons (wet)	Total Tons (dry)	Sample ID	% Moisture	Conc. From Sample Analysis (% dry basis)			Total Pounds Removed		
							N	P	K	N	P	K
1-01	Wheat Silage	5/02/2023	700	218	13-23-P-4	68.90	1.47	0.35	1.57	6,400	1,524	6,836
						68.90	1.47	0.35	1.57			
1-01	Corn Silage	10/18/2023	980	357	13-23-P-17	63.60	1.59	0.24	0.84	11,344	1,712	5,993
						63.60	1.59	0.24	0.84			
1-02	Wheat Silage	4/21/2023	800	281	13-23-P-7	64.90	1.45	0.30	1.31	8,143	1,685	7,357
						64.90	1.45	0.30	1.31			
1-02	Corn Silage	9/08/2023	1,120	408	13-23-P-16	63.60	1.59	0.24	0.84	12,964	1,957	6,849
						63.60	1.59	0.24	0.84			
1-03	Wheat Silage	4/20/2024	700	207	13-23-P-5	70.40	1.44	0.35	1.17	5,967	1,450	4,848
						70.40	1.44	0.35	1.17			
1-03	Corn Silage	9/19/2023	980	304	13-23-P-15	69.00	1.74	0.24	0.77	10,572	1,458	4,679
						69.00	1.74	0.24	0.77			
1-04	Wheat Silage	5/05/2023	800	268	13-22-P-12	66.50	1.31	0.36	1.96	7,022	1,930	10,506
						66.50	1.31	0.36	1.96			
1-04	Corn Silage	9/09/2023	1,120	414	13-23-P-13	63.00	1.09	0.23	0.93	9,034	1,906	7,708
						63.00	1.09	0.23	0.93			
1-05	Wheat Silage	5/02/2023	2,200	739	13-23-P-2	66.40	1.25	0.27	1.07	18,480	3,992	15,819
						66.40	1.25	0.27	1.07			
1-05	Corn Silage	9/21/2023	3,080	1,192	13-23-P-11	61.30	1.07	0.24	1.00	25,508	5,721	23,839
						61.30	1.07	0.24	1.00			
1-06	Wheat Silage	5/03/2023	700	233	13-23-P-3	66.70	1.25	0.29	0.98	5,828	1,352	4,569
						66.70	1.25	0.29	0.98			
1-06	Corn Silage	10/01/2023	980	353	13-23-P-9	64.00	1.20	0.20	1.24	8,467	1,411	8,749
						64.00	1.20	0.20	1.24			
1-11	Wheat Silage	4/28/2023	800	252	13-23-P-6	68.50	1.78	0.29	1.98	8,971	1,462	9,979
						68.50	1.78	0.29	1.98			
1-11	Corn Silage	9/20/2023	1,120	413	13-23-P-12	63.10	1.10	0.24	0.88	9,092	1,984	7,274
						63.10	1.10	0.24	0.88			
1-12	Wheat Silage	4/06/2023	300	92	13-23-P-8	69.40	1.87	0.36	1.65	3,433	661	3,029
						69.40	1.87	0.36	1.65			
1-12	Corn Silage	9/12/2023	420	132		68.50	1.00	0.28	1.27	2,646	741	3,360

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field ID	Crop	Harvest Date	Total Tons (wet)	Total Tons (dry)	Sample ID	% Moisture	Conc. From Sample Analysis (% dry basis)			Total Pounds Removed		
							N	P	K	N	P	K
1-28	Wheat Silage	4/23/2023	800	279	13-23-P-14	68.50	1.00	0.28	1.27	8,376	1,675	10,833
						65.10	1.50	0.30	1.94			
1-28	Corn Silage	9/12/2023	1,120	345	13-23-P-1	65.10	1.50	0.30	1.94	5,864	1,518	7,244
						69.20	0.85	0.22	1.05			
					13-23-P-10	69.20	0.85	0.22	1.05			

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Attachment E

**Results of Record-Keeping Requirements  
Manure Applications to Fields**

(Ref MRP Annual Report, General Section, Item 17, subitems B.3 c, d, and j)

Field: 1-01

Crop: Wheat Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	6,888	lbs
Phosphorus	1,203	lbs
Potassium	7,038	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
02/25/2023	800		0.00	509	90.6	530.0	3,380	602	3,519
		13-22-L-4	0.00	509	90.6	530.0			
11/05/2022	800		0.00	509	90.6	530.0	3,380	602	3,519
		13-22-L-4	0.00	509	90.6	530.0			
Total =	1,600						6,760	1,203	7,038

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-01

Crop: Wheat Silage

Irrigation Applications:

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
11/05/2022	3,900							42.9
	3,900	13-19-W-3	1-01E	Well	1.30			42.9
2/25/2023	3,900							42.9
	3,900	13-19-W-3	1-01E	Well	1.30			42.9
3/25/2023	3,900							42.9
	3,900	13-19-W-3	1-01E	Well	1.30			42.9
Total =	11,700							128.7

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-01

Crop: Corn Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	8,657	lbs
Phosphorus	861	lbs
Potassium	5,882	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K
7/23/2023	3,500		

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
08/18/2023	950		0.00	305	54.6	373.0	2,405	431	2,941
		13-23-L-2	0.00	305	54.6	373.0			
06/16/2023	950		0.00	305	54.6	373.0	2,405	431	2,941
		13-23-L-2	0.00	305	54.6	373.0			
Total =	1,900						4,810	861	5,882

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-01

Crop: Corn Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
6/16/2023	3,500							38.5
	3,500	13-19-W-3	1-01E	Well	1.30			38.5
7/23/2023	4,200							46.2
	4,200	13-19-W-3	1-01E	Well	1.30			46.2
8/05/2023	4,200							46.2
	4,200	13-19-W-3	1-01E	Well	1.30			46.2
8/18/2023	3,500							38.5
	3,500	13-19-W-3	1-01E	Well	1.30			38.5
8/31/2023	4,200							46.2
	4,200	13-19-W-3	1-01E	Well	1.30			46.2
9/13/2023	4,200							46.2
	4,200	13-19-W-3	1-01E	Well	1.30			46.2
9/26/2023	4,200							46.2
	4,200	13-19-W-3	1-01E	Well	1.30			46.2
10/09/2023	3,600							39.6
	3,600	13-19-W-3	1-01E	Well	1.30			39.6
<b>Total =</b>	<b>31,600</b>							<b>347.6</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-02

Crop: Wheat Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	10,472	lbs
Phosphorus	1,203	lbs
Potassium	7,038	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
02/15/2023	400		0.00	509	90.6	530.0	1,690	301	1,760
		13-22-L-4	0.00	509	90.6	530.0			
11/15/2022	1,200		0.00	509	90.6	530.0	5,070	902	5,279
		13-22-L-4	0.00	509	90.6	530.0			
Total =	1,600						6,760	1,203	7,038

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-02

Crop: Wheat Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
11/15/2022	4,500							1,237.5
	4,500	13-22-W-2	1-02 S	Well	33.00			1,237.5
2/15/2023	4,500							1,237.5
	4,500	13-22-W-2	1-02 S	Well	33.00			1,237.5
3/30/2023	4,500							1,237.5
	4,500	13-22-W-2	1-02 S	Well	33.00			1,237.5
<b>Total =</b>	<b>13,500</b>							<b>3,712.5</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-02

Crop: Corn Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	15,550	lbs
Phosphorus	1,088	lbs
Potassium	7,430	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K
6/23/2023	4,000		

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
07/19/2023	1,200		0.00	305	54.6	373.0	3,038	544	3,715
		13-23-L-2	0.00	305	54.6	373.0			
05/17/2023	1,200		0.00	305	54.6	373.0	3,038	544	3,715
		13-23-L-2	0.00	305	54.6	373.0			
Total =	2,400						6,076	1,088	7,430

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-02

Crop: Corn Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
5/17/2023	3,500							563.5
	3,500	13-23-W-2	1-02 S	Well	19.30			563.5
6/23/2023	4,500							724.5
	4,500	13-23-W-2	1-02 S	Well	19.30			724.5
7/06/2023	4,500							724.5
	4,500	13-23-W-2	1-02 S	Well	19.30			724.5
7/19/2023	3,500							563.5
	3,500	13-23-W-2	1-02 S	Well	19.30			563.5
8/01/2023	4,500							724.5
	4,500	13-23-W-2	1-02 S	Well	19.30			724.5
8/14/2023	4,500							724.5
	4,500	13-23-W-2	1-02 S	Well	19.30			724.5
8/27/2023	4,500							724.5
	4,500	13-23-W-2	1-02 S	Well	19.30			724.5
9/09/2023	4,500							724.5
	4,500	13-23-W-2	1-02 S	Well	19.30			724.5
<b>Total =</b>	<b>34,000</b>							<b>5,474.0</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-03

Crop: Wheat Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	5,760	lbs
Phosphorus	301	lbs
Potassium	1,760	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
11/01/2022	400		0.00	509	90.6	530.0	1,690	301	1,760
		13-22-L-4	0.00	509	90.6	530.0			
Total =	400						1,690	301	1,760

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-03

Crop: Wheat Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
11/01/2022	4,200							1,356.6
	4,200	13-15-W-12	1-28	Well	38.70			1,356.6
2/20/2023	4,200							1,356.6
	4,200	13-15-W-12	1-28	Well	38.70			1,356.6
3/20/2023	4,200							1,356.6
	4,200	13-15-W-12	1-28	Well	38.70			1,356.6
<b>Total =</b>	<b>12,600</b>							<b>4,069.8</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-03

Crop: Corn Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	9,884	lbs
Phosphorus	1,088	lbs
Potassium	7,430	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K
6/24/2023	3,500		

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
07/20/2023	1,200		0.00	305	54.6	373.0	3,038	544	3,715
		13-23-L-2	0.00	305	54.6	373.0			
05/18/2023	1,200		0.00	305	54.6	373.0	3,038	544	3,715
		13-23-L-2	0.00	305	54.6	373.0			
Total =	2,400						6,076	1,088	7,430

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-03

Crop: Corn Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
5/18/2023	3,500							38.5
	3,500	13-19-W-3	1-01E	Well	1.30			38.5
6/24/2023	3,500							38.5
	3,500	13-19-W-3	1-01E	Well	1.30			38.5
7/07/2023	3,500							38.5
	3,500	13-19-W-3	1-01E	Well	1.30			38.5
7/20/2023	3,500							38.5
	3,500	13-19-W-3	1-01E	Well	1.30			38.5
8/02/2023	3,500							38.5
	3,500	13-19-W-3	1-01E	Well	1.30			38.5
8/15/2023	3,500							38.5
	3,500	13-19-W-3	1-01E	Well	1.30			38.5
8/28/2023	3,500							38.5
	3,500	13-19-W-3	1-01E	Well	1.30			38.5
9/10/2023	3,500							38.5
	3,500	13-19-W-3	1-01E	Well	1.30			38.5
<b>Total =</b>	<b>28,000</b>							<b>308.0</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-04

Crop: Wheat Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	9,430	lbs
Phosphorus	902	lbs
Potassium	5,279	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
02/20/2023	1,200		0.00	509	90.6	530.0	5,070	902	5,279
		13-22-L-4	0.00	509	90.6	530.0			
Total =	1,200						5,070	902	5,279

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-04

Crop: Wheat Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
11/10/2022	4,500							1,453.5
	4,500	13-15-W-12	1-28	Well	38.70			1,453.5
2/20/2023	4,500							1,453.5
	4,500	13-15-W-12	1-28	Well	38.70			1,453.5
4/01/2023	4,500							1,453.5
	4,500	13-15-W-12	1-28	Well	38.70			1,453.5
<b>Total =</b>	<b>13,500</b>							<b>4,360.5</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-04

Crop: Corn Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	9,626	lbs
Phosphorus	227	lbs
Potassium	1,548	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K
6/14/2023	4,000		

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
07/23/2023	500		0.00	305	54.6	373.0	1,266	227	1,548
		13-23-L-2	0.00	305	54.6	373.0			
Total =	500						1,266	227	1,548

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-04

Crop: Corn Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
5/08/2023	5,500							1,776.5
	5,500	13-15-W-12	1-28	Well	38.70			1,776.5
6/12/2023	4,500							1,453.5
	4,500	13-15-W-12	1-28	Well	38.70			1,453.5
8/31/2023	3,500							1,130.5
	3,500	13-15-W-12	1-28	Well	38.70			1,130.5
<b>Total =</b>	<b>13,500</b>							<b>4,360.5</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-05

Crop: Wheat Silage

Total Nutrients Applied To This Crop:

Nitrogen	21,476	lbs
Phosphorus	5,777	lbs
Potassium	5,149	lbs

Commercial Fertilizer Applied To This Crop:

Date	Total Pounds Applied		
	N	P	K

Solid Manure Applications:

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
10/15/2022	950	628		33.900	1.710	0.460	0.410	21,476	5,777	5,149
			13-22-M-1	33.900	1.710	0.460	0.410			
Totals =	950	628						21,476	5,777	5,149

Wastewater Applications:

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No <sub>3</sub> -N	TKN	P	K	N	P	K
Total =									

Irrigation Applications:

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
Total =								

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-05

Crop: Corn Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	29,076	lbs
Phosphorus	0	lbs
Potassium	0	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K
6/26/2023	11,000		

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
Total =									

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-05

Crop: Corn Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
5/20/2023	12,300							2,300.0
	5,800	13-23-W-6	1-05 N	Well	25.80			1,247.0
	6,500	13-23-W-7	1-05 S	Well	19.40			1,053.0
6/26/2023	12,300							2,300.0
	5,800	13-23-W-6	1-05 N	Well	25.80			1,247.0
	6,500	13-23-W-7	1-05 S	Well	19.40			1,053.0
7/09/2023	12,300							2,300.0
	5,800	13-23-W-6	1-05 N	Well	25.80			1,247.0
	6,500	13-23-W-7	1-05 S	Well	19.40			1,053.0
7/22/2023	12,300							2,300.0
	5,800	13-23-W-6	1-05 N	Well	25.80			1,247.0
	6,500	13-23-W-7	1-05 S	Well	19.40			1,053.0
8/04/2023	12,300							2,300.0
	5,800	13-23-W-6	1-05 N	Well	25.80			1,247.0
	6,500	13-23-W-7	1-05 S	Well	19.40			1,053.0
8/17/2023	12,300							2,300.0
	5,800	13-23-W-6	1-05 N	Well	25.80			1,247.0
	6,500	13-23-W-7	1-05 S	Well	19.40			1,053.0
8/30/2023	12,300							2,300.0
	5,800	13-23-W-6	1-05 N	Well	25.80			1,247.0
	6,500	13-23-W-7	1-05 S	Well	19.40			1,053.0
9/22/2023	10,300							1,976.0
	5,800	13-23-W-6	1-05 N	Well	25.80			1,247.0
	4,500	13-23-W-7	1-05 S	Well	19.40			729.0
Total =	96,400							18,076.0

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-06

Crop: Wheat Silage

Total Nutrients Applied To This Crop:

Nitrogen	6,536	lbs
Phosphorus	1,064	lbs
Potassium	949	lbs

Commercial Fertilizer Applied To This Crop:

Date	Total Pounds Applied		
	N	P	K

Solid Manure Applications:

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
10/15/2022	175	116		33.900	1.710	0.460	0.410	3,956	1,064	949
			13-22-M-1	33.900	1.710	0.460	0.410			
Totals =	175	116						3,956	1,064	949

Wastewater Applications:

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
Total =									

Irrigation Applications:

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-06

Crop: Wheat Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
11/02/2022	4,000							860.0
	4,000	13-23-W-6	1-05 N	Well	25.80			860.0
1/25/2023	4,000							860.0
	4,000	13-23-W-6	1-05 N	Well	25.80			860.0
3/10/2023	4,000							860.0
	4,000	13-23-W-6	1-05 N	Well	25.80			860.0
<b>Total =</b>	<b>12,000</b>							<b>2,580.0</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-06

Crop: Corn Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	10,359	lbs
Phosphorus	0	lbs
Potassium	0	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K
7/06/2023	3,500		

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
Total =									

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-06

Crop: Corn Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
5/30/2023	4,500							967.5
	4,500	13-23-W-6	1-05 N	Well	25.80			967.5
7/06/2023	4,500							967.5
	4,500	13-23-W-6	1-05 N	Well	25.80			967.5
7/19/2023	3,900							838.5
	3,900	13-23-W-6	1-05 N	Well	25.80			838.5
8/01/2023	3,900							838.5
	3,900	13-23-W-6	1-05 N	Well	25.80			838.5
8/14/2023	3,900							838.5
	3,900	13-23-W-6	1-05 N	Well	25.80			838.5
8/27/2023	3,900							838.5
	3,900	13-23-W-6	1-05 N	Well	25.80			838.5
9/09/2023	3,900							838.5
	3,900	13-23-W-6	1-05 N	Well	25.80			838.5
9/22/2023	3,400							731.0
	3,400	13-23-W-6	1-05 N	Well	25.80			731.0
<b>Total =</b>	<b>31,900</b>							<b>6,858.5</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-09

Crop: Pistachios

Total Nutrients Applied To This Crop:

Nitrogen	0	lbs
Phosphorus	0	lbs
Potassium	0	lbs

Commercial Fertilizer Applied To This Crop:

Date	Total Pounds Applied		
	N	P	K

Solid Manure Applications:

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

Wastewater Applications:

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No <sub>3</sub> -N	TKN	P	K	N	P	K
Total =									

Irrigation Applications:

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
Total =								

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-11

Crop: Wheat Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	9,839	lbs
Phosphorus	2,432	lbs
Potassium	2,168	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
10/15/2022	400	264		33.900	1.710	0.460	0.410	9,042	2,432	2,168
			13-22-M-1	33.900	1.710	0.460	0.410			
<b>Totals =</b>	<b>400</b>	<b>264</b>						<b>9,042</b>	<b>2,432</b>	<b>2,168</b>

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
<b>Total =</b>									

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-11

Crop: Wheat Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
10/25/2022	4,500							265.5
	4,500	13-23-W-1	1-11	Well	7.10			265.5
1/25/2023	4,500							265.5
	4,500	13-23-W-1	1-11	Well	7.10			265.5
3/25/2023	4,500							265.5
	4,500	13-23-W-1	1-11	Well	7.10			265.5
<b>Total =</b>	<b>13,500</b>							<b>796.5</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-11

Crop: Corn Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	9,688	lbs
Phosphorus	0	lbs
Potassium	0	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K
6/25/2023	4,000		

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
Total =									

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-11

Crop: Corn Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
5/19/2023	6,500							1,137.5
	6,500	13-23-W-7	1-11	Well	21.00			1,137.5
6/25/2023	4,500							787.5
	4,500	13-23-W-7	1-11	Well	21.00			787.5
7/08/2023	4,500							787.5
	4,500	13-23-W-7	1-11	Well	21.00			787.5
7/21/2023	4,500							787.5
	4,500	13-23-W-7	1-11	Well	21.00			787.5
8/03/2023	4,500							787.5
	4,500	13-23-W-7	1-11	Well	21.00			787.5
8/16/2023	4,500							787.5
	4,500	13-23-W-7	1-11	Well	21.00			787.5
8/29/2023	3,500							612.5
	3,500	13-23-W-7	1-11	Well	21.00			612.5
Total =	32,500							5,687.5

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-12

Crop: Wheat Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	1,514	lbs
Phosphorus	304	lbs
Potassium	2,117	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
10/10/2022	500		0.00	352	73.2	510.0	1,461	304	2,117
		13-22-L-3	0.00	352	73.2	510.0			
Total =	500						1,461	304	2,117

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-12

Crop: Wheat Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
10/10/2022	1,600							17.6
	1,600	13-19-W-3	1-01E	Well	1.30			17.6
1/15/2023	1,600							17.6
	1,600	13-19-W-3	1-01E	Well	1.30			17.6
3/15/2023	1,600							17.6
	1,600	13-19-W-3	1-01E	Well	1.30			17.6
<b>Total =</b>	<b>4,800</b>							<b>52.8</b>

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-12

Crop: Corn Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	3,132	lbs
Phosphorus	272	lbs
Potassium	1,858	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K
6/17/2023	1,500		

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
07/26/2023	300		0.00	305	54.6	373.0	759	136	929
		13-23-L-2	0.00	305	54.6	373.0			
05/11/2023	300		0.00	305	54.6	373.0	759	136	929
		13-23-L-2	0.00	305	54.6	373.0			
Total =	600						1,519	272	1,858

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-12

Crop: Corn Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
5/11/2023	1,500							16.5
	1,500	13-19-W-3	1-01E	Well	1.30			16.5
6/17/2023	1,500							16.5
	1,500	13-19-W-3	1-01E	Well	1.30			16.5
6/30/2023	1,500							16.5
	1,500	13-19-W-3	1-01E	Well	1.30			16.5
7/26/2023	1,500							16.5
	1,500	13-19-W-3	1-01E	Well	1.30			16.5
8/08/2023	1,500							16.5
	1,500	13-19-W-3	1-01E	Well	1.30			16.5
8/21/2023	1,500							16.5
	1,500	13-19-W-3	1-01E	Well	1.30			16.5
9/06/2023	1,300							14.3
	1,300	13-19-W-3	1-01E	Well	1.30			14.3
Total =	10,300							113.3

Dairy Name: MS Monteiro & Sons Dairy

Page 33 of 36

Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-28

Crop: Wheat Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	10,275	lbs
Phosphorus	1,053	lbs
Potassium	6,159	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
01/30/2023	450		0.00	509	90.6	530.0	1,901	338	1,980
		13-22-L-4	0.00	509	90.6	530.0			
10/30/2022	950		0.00	509	90.6	530.0	4,013	714	4,179
		13-22-L-4	0.00	509	90.6	530.0			
Total =	1,400						5,915	1,053	6,159

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-28

Crop: Wheat Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
10/30/2022	4,500							1,453.5
	4,500	13-15-W-12	1-28	Well	38.70			1,453.5
1/30/2023	4,500							1,453.5
	4,500	13-15-W-12	1-28	Well	38.70			1,453.5
3/20/2023	4,500							1,453.5
	4,500	13-15-W-12	1-28	Well	38.70			1,453.5
<b>Total =</b>	<b>13,500</b>							<b>4,360.5</b>

Dairy Name: MS Monteiro & Sons Dairy

Page 35 of 36

Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-28

Crop: Corn Silage

**Total Nutrients Applied To This Crop:**

Nitrogen	7,760	lbs
Phosphorus	372	lbs
Potassium	2,590	lbs

**Commercial Fertilizer Applied To This Crop:**

Date	Total Pounds Applied		
	N	P	K

**Solid Manure Applications:**

Date	Total Tons (as is)	Total Tons (dry)	Sample ID	Moisture (%)	Conc. from Sample Analysis (% dry)			Total Pounds Applied		
					N	P	K	N	P	K
Totals =	0	0						0	0	0

**Wastewater Applications:**

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No3-N	TKN	P	K	N	P	K
05/25/2023	800		0.00	293	56.0	390.0	1,946	372	2,590
		13-23-L-1	0.00	293	56.0	390.0			
Total =	800						1,946	372	2,590

**Irrigation Applications:**

Dairy Name: MS Monteiro & Sons Dairy

Page 36 of 36

Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 1-28

Crop: Corn Silage

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO <sub>3</sub> -N	NH <sub>4</sub> -N	TKN	
5/25/2023	4,500							1,453.5
	4,500	13-11-W-14	1-28	Well	38.70			1,453.5
7/14/2023	4,500							1,453.5
	4,500	13-15-W-12	1-28	Well	38.70			1,453.5
7/27/2023	4,500							1,453.5
	4,500	13-11-W-14	1-28	Well	38.70			1,453.5
8/09/2023	4,500							1,453.5
	4,500	13-11-W-14	1-28	Well	38.70			1,453.5
Total =	18,000							5,814.0

Dairy Name: MS Monteiro & Sons Dairy

Page 1 of 2

Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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Attachment F  
**Results of Record-Keeping Requirements  
Weather Conditions During Applications**

(Ref MRP Annual Report, General Section, Item 17, subitem B.3 e)

Application Weather Conditions

Field	Date	Type of Application	Weather Conditions		
			24 hr Prior	During	24 hr After
1-01	11/05/2022	Process Wastewater	Nominal	Nominal	Nominal
1-01	02/25/2023	Process Wastewater	Nominal	Nominal	Nominal
1-01	06/16/2023	Process Wastewater	Nominal	Nominal	Nominal
1-01	08/18/2023	Process Wastewater	Nominal	Nominal	Nominal
1-02	11/15/2022	Process Wastewater	Nominal	Nominal	Nominal
1-02	02/15/2023	Process Wastewater	Nominal	Nominal	Nominal
1-02	05/17/2023	Process Wastewater	Nominal	Nominal	Nominal
1-02	07/19/2023	Process Wastewater	Nominal	Nominal	Nominal
1-03	11/01/2022	Process Wastewater	Nominal	Nominal	Nominal
1-03	05/18/2023	Process Wastewater	Nominal	Nominal	Nominal
1-03	07/20/2023	Process Wastewater	Nominal	Nominal	Nominal
1-04	02/20/2023	Process Wastewater	Nominal	Nominal	Nominal
1-04	07/23/2023	Process Wastewater	Nominal	Nominal	Nominal
1-05	10/15/2022	Manure	Nominal	Nominal	Nominal
1-06	10/15/2022	Manure	Nominal	Nominal	Nominal
1-11	10/15/2022	Manure	Nominal	Nominal	Nominal
1-12	10/10/2022	Process Wastewater	Nominal	Nominal	Nominal
1-12	05/11/2023	Process Wastewater	Nominal	Nominal	Nominal
1-12	07/26/2023	Process Wastewater	Nominal	Nominal	Nominal
1-28	10/30/2022	Process Wastewater	Nominal	Nominal	Nominal
1-28	01/30/2023	Process Wastewater	Nominal	Nominal	Nominal
1-28	05/25/2023	Process Wastewater	Nominal	Nominal	Nominal

**Dairy Name:** MS Monteiro & Sons Dairy

Page 2 of 2

**Dairy Address:** 3515 Ave 228

Tulare, CA 93274

**Report Period:** Jan 01 through Dec 31, 2023

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**Note:** Nominal applies to any weather condition that is not Precipitation or Standing Water when the application occurred .

Dairy Name: MS Monteiro & Sons Dairy

Page 1 of 2

Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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Attachment G

**Support for Estimated Solid Manure & Wastewater and Nutrients Transferred Offsite**

(Ref MRP Annual Report, General Section, Item 6)

Solid Manure Transfers

Date Of Transfer	Total Manure (tons)	Total Dry Manure (tons)	Sample ID	Moisture %	Total (% dry basis)			Total Pounds Transferred		
					N	P	K	N	P	K
Grand Total / Average	0							0	0	0

Dairy Name: MS Monteiro & Sons Dairy

Page 2 of 2

Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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Wastewater Transfers

Date Of Transfer	Source Location	Location Aerated?	Total Gal (1,000 gal)	Sample ID	Conc. From Sample Analysis (mg/l)				EC (umhos/cm)	Total lbs Transferred			
					NO3-N	TKN	P	K		N	P	K	Salt
Grand Totals / Averages			0							0	0	0	0

Dairy Name: MS Monteiro & Sons Dairy

Page 1 of 9

Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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Attachment H

**Tabulated Analytical Sample Data**

(Ref MRP Annual Report, General Section, Item 16)

Manure Samples

Sample Date	Source Location	Sample ID	Moisture %	Total (% Dry Basis)		
				N	P	K
05/15/2023	Corral	13-23-M-2	5.30 0.01	2.00 0.10	0.49 0.01	1.45 0.01
10/03/2023	Corral	13-23-M-1	23.50 0.01	0.86 0.10	0.36 0.01	1.24 0.01
Average			14.40	1.43	0.43	1.35

Manure General Mineral Analysis

Required Once Every Two Years

Last Analysis Date: 9/29/2022

Sample Date	Source Location	Sample ID	%Na	%Ca	%Mg	%S	%Cl	%ASH

Dairy Name: MS Monteiro & Sons Dairy

Page 2 of 9

Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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Wastewater Samples

(NO<sub>3</sub>-N required only if lagoon is aerated)

Sample Date	Source Location	Sample ID	Location Aerated?	Total (mg/l)						EC (umhos/cm)
				NO <sub>3</sub> - N	NH <sub>4</sub> - N	TKN	P	K	TDS	
02/17/2023	Storage 1	13-23-L-3	N		292.0	330	62.5	755.0	4,500	6,780
05/15/2023	Storage 1	13-23-L-2	N		232.0	305	54.6	373.0	3,210	4,840
08/28/2023	Storage 1	13-23-L-1	N		280.0	293	56.0	390.0	3,790	5,670
<b>Averages</b>				<b>268.0</b>	<b>309</b>	<b>57.7</b>	<b>506.0</b>	<b>3,833</b>	<b>5,763</b>	

Wastewater General Minerals Analysis

Required Once Every Two Years

Last Analysis Date: 3/21/2018

Sample Date	Source Location	Sample ID	CO <sub>3</sub> (mg/l)	HCO <sub>3</sub> (mg/l)	Cl (mg/l)	SO <sub>4</sub> -S (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Water Supply Samples

(NH4-N analyzed only if Field Test is positive)

Sample Date	Source ID	Source Type	Status	Sample ID	Condition	Last Gen Min Analysis	EC (umhos/cm)	NO <sub>3</sub> -N (mg/l)	NH <sub>4</sub> -N (mg/l)	TKN (mg/l)	Notes
	1- 5 LP	Surface	Active								
	1-22 LP	Surface	Active								
	1-01	Well	Active			2/14/2019					
	1-01E	Well	Active			2/14/2019					
7/31/2023	1-02 N	Well	Active	13-23-W-3	Wet	7/28/2017	475 10.00	18.2 0.10			
7/31/2023	1-02 S	Well	InActive	13-23-W-2	Wet	7/28/2017	495 10.00	19.3 0.10			
7/31/2023	1-03	Well	InActive	13-23-W-4	Wet	7/28/2017	480 10.00	0.4 0.10			
7/31/2023	1-04	Well	Active	13-23-W-5	Wet	7/28/2017	476 10.00	19.1 0.10			
3/28/2023	1-04 D	Well	Active	13-23-W-10	Wet	2/14/2019	435 10.00	14.1 0.10			
7/31/2023	1-05 N	Well	Active	13-23-W-6	Wet		639 10.00	25.8 0.10			
7/31/2023	1-05 S	Well	Active	13-23-W-7	Wet	11/19/2015	490 10.00	19.4 0.10			
	1-07 D	Well	Active			8/13/2014					
7/31/2023	1-07 N	Well	Active	13-23-W-8	Wet	7/28/2017	914 10.00	40.1 0.10			
	1-07 S	Well	Active								
7/31/2023	1-11	Well	Active	13-23-W-7	Wet	11/19/2015	530 10.00	21.0 0.10			

Notes: Laboratory detection limit listed below each result.

Attachment H

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Sample Date	Source ID	Source Type	Status	Sample ID	Condition	Last Gen Min Analysis	EC (umhos/cm)	NO3-N (mg/l)	NH4-N (mg/l)	TKN (mg/l)	Notes
	1-22	Well	InActive								
	1-28	Well	InActive								
	1-28 D	Well	Active								
3/28/2023	Dairy East	Well	Active	13-23-W-11	Wet	8/13/2014	434 10.00	13.5 0.10			
3/28/2023	Dairy West	Well	Active	13-23-W-9	Wet	8/13/2014	476 10.00	19.8 0.10			

UTS - Unable To Sample (well needing repair, power disconnected, no ditch water received, etc.)

**Dairy Name:** MS Monteiro & Sons Dairy

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**Dairy Address:** 3515 Ave 228

Tulare, CA 93274

**Report Period:** Jan 01 through Dec 31, 2023

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Water Supply General Minerals Analysis

Required Every Five Years (20% Anually Allowed)

Sample Date	Source ID	Source Type	Sample ID	TDS (mg/l)	CO <sub>3</sub> (mg/l)	HCO <sub>3</sub> (mg/l)	Cl (mg/l)	SO <sub>4-S</sub> (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

#### Soil Samples

Soluable Phosphorus (PO<sub>4</sub>-P) required once every five years (20% annually allowed)

Remainder of soil analysis is recommended but not required

Sample Date	Field ID	Sample Location	Sample ID	Last PO <sub>4</sub> -P Analysis	Depth 0 to 1 ft					Depth 1 to 2 ft
					NO <sub>3</sub> -N (mg/kg)	PO <sub>4</sub> -P (mg/kg)	K (AA) (mg/kg)	EC (dS/m)	%OM	
	1-01									
	1-02									
	1-03									
	1-04									
	1-05			4/23/2018						
	1-06			4/23/2018						
	1-07									
	1-08									
	1-09									
	1-10									
	1-11			4/04/2018						
	1-12									
	1-22									
	1-28									
	1-30									

Dairy Name: MS Monteiro & Sons Dairy

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Dairy Address: 3515 Ave 228

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Plant Tissue Samples

Harvest

Sample Date	Field ID	Crop	Sample Location	Sample ID	Volume % Moisture	Total (% Dry Basis)			
						N	P	K	ASH
05/25/2023	1-01	Wheat Silage		13-23-P-4	68.90 0.01	1.47 0.100	0.35 0.002	1.57 0.002	10.70 0.01
09/13/2023	1-01	Corn Silage		13-23-P-17	63.60	1.59	0.24	0.84	5.92
05/05/2023	1-02	Wheat Silage		13-23-P-7	64.90 0.01	1.45 0.100	0.30 0.002	1.31 0.002	6.78 0.01
09/13/2023	1-02	Corn Silage		13-23-P-16	63.60	1.59	0.24	0.84	5.92
05/01/2023	1-03	Wheat Silage		13-23-P-5	70.40 0.01	1.44 0.100	0.35 0.002	1.17 0.002	8.73 0.01
09/13/2023	1-03	Corn Silage		13-23-P-15	69.00 0.01	1.74 0.100	0.24 0.002	0.77 0.002	5.37 0.01
09/06/2023	1-04	Corn Silage		13-23-P-13	63.00	1.09	0.23	0.93	5.00
05/18/2023	1-05	Wheat Silage		13-23-P-2	66.40 0.01	1.25 0.100	0.27 0.002	1.07 0.002	8.62 0.01
09/16/2023	1-05	Corn Silage		13-23-P-11	61.30	1.07	0.24	1.00	5.28
05/18/2023	1-06	Wheat Silage		13-23-P-3	66.70 0.01	1.25 0.100	0.29 0.002	0.98 0.002	7.62 0.01
09/26/2023	1-06	Corn Silage		13-23-P-9	64.00 0.01	1.20 0.100	0.20 0.002	1.24 0.002	5.92 0.01
05/20/2023	1-11	Wheat Silage		13-23-P-6	68.50 0.01	1.78 0.100	0.29 0.002	1.98 0.002	12.80 0.01
09/12/2023	1-11	Corn Silage		13-23-P-12	63.10 0.01	1.10 0.100	0.24 0.002	0.88 0.002	4.97 0.01
05/05/2023	1-12	Wheat Silage		13-23-P-8	69.40 0.01	1.87 0.100	0.36 0.002	1.65 0.002	9.82 0.01

**Dairy Name:** MS Monteiro & Sons Dairy

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**Dairy Address:** 3515 Ave 228

Tulare, CA 93274

**Report Period:** Jan 01 through Dec 31, 2023

Sample Date	Field ID	Crop	Sample Location	Sample ID	Volume % Moisture	Total (% Dry Basis)			
						N	P	K	ASH
09/09/2023	1-12	Corn Silage		13-23-P-14	68.50	1.00	0.28	1.27	7.15
05/23/2023	1-28	Wheat Silage		13-23-P-1	65.10	1.50	0.30	1.94	8.40
09/22/2023	1-28	Corn Silage		13-23-P-10	69.20 0.01	0.85 0.100	0.22 0.002	1.05 0.002	6.16 0.01

**Dairy Name:** MS Monteiro & Sons Dairy

Page 9 of 9

**Dairy Address:** 3515 Ave 228

Tulare, CA 93274

**Report Period:** Jan 01 through Dec 31, 2023

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**Plant Tissue Samples**

Mid-Season - Optional analysis, required only if fertilizing in excess of 1.4 nitrogen balance

Sample Date	Field ID	Sample Location	Description	Sample ID	Leaf %N (dry)	Grain Stem NO <sub>3</sub> -N (mg/kg)

March 17, 2022

**Valley Tech Agricultural Lab Services**  
 Attn: Joe O' Brien  
 2120 S. "K" St.  
 Tulare, CA 93274

Lab ID : VI 2241503  
 Customer : 4-16916

### Laboratory Report

**Introduction:** This report package contains total of 7 pages divided into 3 sections:

- |                 |   |
|-----------------|---|
| Case Narrative  | (2 pages) : 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 ID #	Matrix
Dom Well (Dairy East)	03/07/2022	03/07/2022	VI 2241503-001	AgW
Dom Well (Dairy West)	03/07/2022	03/07/2022	VI 2241503-002	AgW
Dom Well 1-4	03/07/2022	03/07/2022	VI 2241503-003	AgW
Dom Well 1-13	03/07/2022	03/07/2022	VI 2241503-004	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 arrived on ice. All samples were prepared and analyzed within the method specified hold time. 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 attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

#### Inorganic - Wet Chemistry QC

2510B	03/11/2022:203553 All analysis quality controls are within established criteria
	03/11/2022:202724 All preparation quality controls are within established criteria (performed at FGL-SP ELAP# 1573)
4500NO3F	03/08/2022:203423 All analysis quality controls are within established criteria
	03/08/2022:202624 All preparation quality controls are within established criteria (performed at FGL-SP ELAP# 1573)

March 17, 2022  
**Valley Tech Agricultural Lab Services**

Lab ID : VI 2241503  
Customer : 4-16916

**Certification::** I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above. 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.

KD:JRD

Approved By **Kelly A. Dunnahoo, B.S.** 

Digitally signed by Kelly A. Dunnahoo, B.S.  
Title: Laboratory Director  
Date: 2022-03-18

March 17, 2022

Lab ID : VI 2241503-001  
Customer ID : 4-16916

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Sampled On : March 7, 2022-07:45  
Sampled By : Manuel Avila  
Received On : March 7, 2022-15:00  
Matrix : Ag Water

Description : Dom Well (Dairy East)  
Project : DFM - MS Monteico & Sons

**Sample Result - Inorganic**

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Date/ID	Sample Analysis Method	Date/ID
<b>Dairy Analysis</b>								
Nitrate Nitrogen	18.7	0.2	mg/L		4500NO3F	03/08/22:202624	4500NO3F	03/08/22:203423
Conductivity	476	1	umhos/cm		2510B	03/11/22:202724	2510B	03/11/22:203553

ND=Non-Detected. PQL=Practical Quantitation Limit. \* PQL adjusted for dilution.

March 17, 2022

Lab ID : VI 2241503-002  
Customer ID : 4-16916

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Sampled On : March 7, 2022-08:00  
Sampled By : Manuel Avila  
Received On : March 7, 2022-15:00  
Matrix : Ag Water

Description : Dom Well (Dairy West)  
Project : DFM - MS Monteico & Sons

**Sample Result - Inorganic**

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Date/ID	Sample Analysis Method	Date/ID
<b>Dairy Analysis</b>								
Nitrate Nitrogen	20.4	0.2	mg/L		4500NO3F	03/08/22:202624	4500NO3F	03/08/22:203423
Conductivity	480	1	umhos/cm		2510B	03/11/22:202724	2510B	03/11/22:203553

ND=Non-Detected. PQL=Practical Quantitation Limit. \* PQL adjusted for dilution.

March 17, 2022

Lab ID : VI 2241503-003  
Customer ID : 4-16916

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Sampled On : March 7, 2022-08:15  
Sampled By : Manuel Avila  
Received On : March 7, 2022-15:00  
Matrix : Ag Water

Description : Dom Well 1-4  
Project : DFM - MS Monteico & Sons

**Sample Result - Inorganic**

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Date/ID	Sample Analysis Method	Date/ID
<b>Dairy Analysis</b>								
Nitrate Nitrogen	22.9	0.2	mg/L		4500NO3F	03/08/22:202624	4500NO3F	03/08/22:203423
Conductivity	559	1	umhos/cm		2510B	03/11/22:202724	2510B	03/11/22:203553

ND=Non-Detected. PQL=Practical Quantitation Limit. \* PQL adjusted for dilution.

March 17, 2022

Lab ID : VI 2241503-004  
Customer ID : 4-16916

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Sampled On : March 7, 2022-08:30  
Sampled By : Manuel Avila  
Received On : March 7, 2022-15:00  
Matrix : Ag Water

Description : Dom Well 1-13  
Project : DFM - MS Monteico & Sons

**Sample Result - Inorganic**

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Date/ID	Sample Analysis Method	Date/ID
<b>Dairy Analysis</b>								
Nitrate Nitrogen	0.2	0.2	mg/L		4500NO3F	03/08/22:202624	4500NO3F	03/08/22:203423
Conductivity	124	1	umhos/cm		2510B	03/11/22:202724	2510B	03/11/22:203553

ND=Non-Detected. PQL=Practical Quantitation Limit. \* PQL adjusted for dilution.

March 17, 2022

**Valley Tech Agricultural Lab Services**

Lab ID : VI 2241503

Customer : 4-16916

**Quality Control - Inorganic**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
Conductivity	2510B	03/11/22:203553sta	ICB CCV CCV CCV	umhos/cm umhos/cm umhos/cm umhos/cm	997.0 997.0 997.0	0.0600 96.0% 95.8% 95.9%	1 95-105 95-105 95-105	
E. C.	2510B	03/11/22:202724sta (VI 2241524-001)	Blank Dup Blank Dup	umhos/cm umhos/cm umhos/cm umhos/cm		ND 0.2% ND 0.06%	<1 5 <1 5	
Nitrate + Nitrite as N	4500NO3F	03/08/22:202624vvh (STK2233023-001)	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	11.22 5.609 5.609 5.609	ND 102% 98.6% 100% 1.1%	<0.2 80-120 5-285 5-285 ≤30.4	
	4500NO3F	03/08/22:203423vvh	CCB CCV CCB CCB CCV CCB CCV	mg/l mg/l mg/l mg/l mg/l mg/l mg/l	11.22 11.22 11.22 11.22	0.0490 100% 0.125 0.0830 101% 0.0920 101%	0.2 90-110 0.2 0.2 90-110 0.2 90-110	
Nitrate Nitrogen	4500NO3F	03/08/22:202624vvh	Blank	mg/L		ND	<0.2	
<b>Definition</b>								
ICB	: Initial Calibration Blank - Analyzed to verify the instrument baseline is within criteria.							
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.							
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.							
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.							
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 analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.							
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.							
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.							
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.							

# Valley Tech

4016916  
2241503

2120 South 'K' Street  
Tulare, California 93274  
Office: 559 - 688-5684  
Fax: 559 - 688-5768

## AGRICULTURAL LABORATORY SERVICES

Billing: DFM

Authorized Copy To:

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

FARM/DAIRY PROJECT: MS MONTEIRO & SONS

RANCH/Site: \_\_\_\_\_

MATERIAL: ( ) Lagoon Waste Water  Irrigation Water ( ) Manure ( ) Soil ( ) Plant Tissue ( ) Other: \_\_\_\_\_

CROP: \_\_\_\_\_ Stage: \_\_\_\_\_ Soil Depth: \_\_\_\_\_ Pattern: \_\_\_\_\_

Conditions-Comments: \_\_\_\_\_ Collected By: Manuel Avila

### IRRIGATION/GROUND WATER

- W-1 pH,EC,Ca,Mg,Na,K,B,HCO<sub>3</sub>,CO<sub>3</sub>,NO<sub>3</sub>N,Cl,SO<sub>4</sub>S,SAR/EC Ratio
- W-2 EC, NO<sub>3</sub>N, NH<sub>4</sub>N
- W-3 EC,NO<sub>3</sub>N (Reg Standards) *W-14*
- W-4 EC,NO<sub>3</sub>N, NH<sub>4</sub>N, TDS, Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl
- W-5 EC, NO<sub>3</sub>N, TDS, TP (Subsurface Drainage)
- W-6 Other: \_\_\_\_\_

### PLANT TISSUE

- P-1 N, P, K, Ca, Mg, Zn, Mn, Fe, Cu, B (Big 10)
- P-2 Complete (P1+Na,Cl)
- P-3 Harvested Crop (N, P, K, DM, Ash): \_\_\_\_\_
- P-4 TN or NO<sub>3</sub>-N
- P-5 Plant TN or NO<sub>3</sub>-N, TP or PO<sub>4</sub>-P, K, Zn
- P-10 Other: \_\_\_\_\_
- P-11 TN, NO<sub>3</sub>N, PO<sub>4</sub>P, K
- P-12 TN, P, K

### SOIL

- S-1 SP, pH, EC, Ca, Mg, Na, K, Cl, ESP, LP, NO<sub>3</sub>-N, PO<sub>4</sub>-P, K-AA, Zn, Mn, Fe, Cu, SO<sub>4</sub>-S, CEC
- S-2 S-1 plus OM, TN, CaCO<sub>3</sub>
- S-3 SP, pH, EC, Ca, Mg, Na, K, ESP, LP, B, SO<sub>4</sub>-S
- S-4 SP, pH, EC, Ca, Mg, Na, K, ESP, LP, NO<sub>3</sub>-N, PO<sub>4</sub>-P, K-AA, Zn
- S-14 Other: \_\_\_\_\_

### PROCESS WASTE WATER (LAGOON)

- L-1 EC,NH<sub>4</sub>-N,TKN,TP,TK,TDS (Reg Standards)
- L-2 EC,NH<sub>4</sub>-N, TKN,TP,TK,Ca,Mg,Na, HCO<sub>3</sub>, CO<sub>3</sub>, Cl,SO<sub>4</sub>-S
- L-3 pH, TDS, EC, NO<sub>3</sub>N, NH<sub>4</sub>N, TKN, TP,TK
- L-4 Other: \_\_\_\_\_

### MANURE

- M-1 TN, TP, TK, %Moisture (Reg Standards)
- M-2 TN, TP, TK, %Moisture, Ca, Mg, Na, Cl, S, Ash
- M-5 Other: \_\_\_\_\_

Sample Description	Test	Date/Time
1 Dom Well DAIRY EAST	W-3	3-7-22 0745
2 Dom. Well DAIRY WEST	W-3	3-7-22 0800
3 Dom Well Da 1-4	W-3	3-7-22 0815
4 Dom Well 1-13	W-3	3-7-22 0830
5		
6		
7		
8		
9		
10		

Sample Description	Test	Date/Time
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

### CHAIN of CUSTODY Sample Transfer

Signature - Name	Company	Received Date & Time	Relinquished Date & Time
1st <i>Manuel Avila</i>	DFM	XXXXXXXXXXXXXX	3/07/22 0900
2nd <i>GW</i>	Valley Tech	3/07/22 0900	XXXXXXXXXXXXXX
3rd <i>Manuel Avila</i>	✓	XXXXXXXXXXXXXX	3-7-22 15:06

*QH*

*FBC*

*3/7/22*

*1506*

LABORATORY NUMBER

*3-07X006*

Logged In By: *GW* *J*

TOTAL SAMPLES

*3/7/22*

*74*

*G1S*

*3/8/22*

*10:30am*

*C. Armas*

**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 # 5TC
  2. Were samples received in a chilled condition? Temps: R61 / 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 N/A
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 N/A
9. Verify sample date, time and sampler name  Yes  No N/A

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): CAH

**Sample Receipt at SP:**

1. Were samples received in a chilled condition? Temps: 36 /   /   /   /    
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: 556255643  
556255627
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 N/A
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?  Yes  No N/A FGL  
[Exception: Oil & Grease, VOA and CrVI verified in lab]
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 N/A

Attach labels to the containers and include a copy of the COC for lab delivery.

Sample Receipt, Login and Verification completed by (initials): CAH

**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 additional com contacts)

(4016916)  
Valley Tech Agricultural Lab Services  
VI 2241503

iv 03/08/2022 09:44:45



01 2241503

August 16, 2022

Lab No. : VI 2245889

Customer No. : 4016916

**Valley Tech Agricultural Lab Services**  
 Attn: Joe O' Brien  
 2120 S. "K" St.  
 Tulare, CA 93274

### Laboratory Report

**Introduction:** This report package contains a total of 13 pages divided into 3 sections:

- |                 |            |   |
|-----------------|------------|---|
| Case Narrative  | (2 pages)  | : An overview of the work performed at FGL. |
| Sample Results  | (10 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
1-4	08/03/2022	08/03/2022	VI 2245889-001	AGW
1-14W	08/03/2022	08/03/2022	VI 2245889-002	AGW
1-5 N	08/03/2022	08/03/2022	VI 2245889-003	AGW
1-2S	08/03/2022	08/03/2022	VI 2245889-004	AGW
1-3	08/03/2022	08/03/2022	VI 2245889-005	AGW
Northern Farming	08/03/2022	08/03/2022	VI 2245889-006	AGW
1-29	08/03/2022	08/03/2022	VI 2245889-007	AGW
1-11	08/03/2022	08/03/2022	VI 2245889-008	AGW
1-5S	08/03/2022	08/03/2022	VI 2245889-009	AGW
1-2N	08/03/2022	08/03/2022	VI 2245889-010	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

SM 2510 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)

# Valley Tech

2120 South 'K' Street  
Tulare, California 93274  
Office: 559 - 688-5684  
Fax: 559 - 688-5768

7245889

## AGRICULTURAL LABORATORY SERVICES

Billing: DEM Valley Tech

Dairy Facility Monitoring

Authorized Copy To: \_\_\_\_\_

Email: \_\_\_\_\_

RANCH/Site: \_\_\_\_\_

FARM/DAIRY PROJECT: M S Montes & Sons

MATERIAL:  Lagoon Waste Water  Irrigation Water  Manure  Soil  Plant Tissue  Other: \_\_\_\_\_

CROP: \_\_\_\_\_ Stage: \_\_\_\_\_ Soil Depth: \_\_\_\_\_ Pattern: \_\_\_\_\_

Conditions-Comments: \_\_\_\_\_ Collected By: Client

### IRRIGATION/GROUND WATER

W-1 pH,EC,Ca,Mg,Na,K,B,HCO<sub>3</sub>,CO<sub>3</sub>,NO<sub>3</sub>N,Cl,SO<sub>4</sub>S,SAR/EC Ratio

W-2 EC,NO<sub>3</sub>N,NH<sub>4</sub>N

W-3 EC,NO<sub>3</sub>N (Reg Standards)

W-4 EC,NO<sub>3</sub>N,NH<sub>4</sub>N,TDS,Ca,Mg,Na,HCO<sub>3</sub>,CO<sub>3</sub>,SO<sub>4</sub>S,Cl

W-5 EC,NO<sub>3</sub>N,TDS,TP (Subsurface Drainage)

W-6 Other: \_\_\_\_\_

### PLANT TISSUE

P-1 N, P, K, Ca, Mg, Zn, Mn, Fe, Cu, B (Big 10)

P-2 Complete (P1+Na,Cl)

P-3 Harvested Crop (N, P, K, DM, Ash): \_\_\_\_\_

P-4 TN or NO<sub>3</sub>-N

P-5 Plant TN or NO<sub>3</sub>-N, TP or PO<sub>4</sub>-P, K, Zn

P-10 Other: \_\_\_\_\_

P-11 TN, NO<sub>3</sub>N, PO<sub>4</sub>P, K

P-12 TN, P, K

### SOIL

S-1 SP, pH, EC, Ca, Mg, Na, K, Cl, ESP, LP, NO<sub>3</sub>-N, PO<sub>4</sub>-P, K-AA, Zn, Mn, Fe, Cu, SO<sub>4</sub>S, CEC

S-2 S-1 plus OM, TN, CaCO<sub>3</sub>

S-3 SP, pH, EC, Ca, Mg, Na, K, ESP, LP, B, SO<sub>4</sub>S

S-4 SP, pH, EC, Ca, Mg, Na, K, ESP, LP, NO<sub>3</sub>-N, PO<sub>4</sub>-P, K-AA, Zn

S-14 Other: \_\_\_\_\_

### MANURE

M-1 TN, TP, TK, %Moisture (Reg Standards)

M-2 TN, TP, TK, %Moisture, Ca, Mg, Na, Cl, S, Ash

M-5 Other: \_\_\_\_\_

Sample Description	Test	Date/Time	Sample Description	Test	Date/Time
1 Y-4	W-3	8-3-22 8:45 AM	11		
2 1-14 W	W-3	8-3-22 8:20 AM	12		
3 1-5 N	W-3	8-3-22 9:35 AM	13		
4 1-2 S	W-3	8-3-22 9:25 AM	14		
5 1-3	W-3	8-3-22 8:30 AM	15		
6 NORTH OF Road	W-3	8-3-22 8:25 AM	16		
7 1-29	W-3	8-3-22 9:05 AM	17		
8 1-11	W-3	8-3-22 8:10 AM	18		
9 1-5 S	W-3	8-3-22 8:15 AM	19		
10 1-2 N	W-3	8-3-22 7:50 AM			

### CHAIN of CUSTODY Sample Transfer

Signature - Name	Company	Received Date & Time	Relinquished Date & Time
1st <u>Marcelo Q. Cach</u>	DEM	XXXXXXXXXXXXXX	8-3-22 12:30 PM
2nd <u>all 311</u>	VT	8-3-22 12:30	XXXXXXXXXXXXXX
3rd <u>JF</u>	JF	XXXXXXXXXXXXXX	9-3-22 1:47

Reid: 005 PGL

UPS 8/4/22 1:43

Logged In By: AH  
Ref: 005 8-3-2022 1730  
Rec'd: UPS 8-3-2022 1730

TOTAL SAMPLES 9 ID 1D

LABORATORY NUMBER WT 28346 AH  
0803 X003

**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: 2022-08-17

August 16, 2022

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Description : 1-4  
Project : Dem Valley Tech

Lab No. : VI 2245889-001

Customer No. : 4016916

Sampled On : August 3, 2022 at 08:15  
Sampled By : Client

Received On : August 3, 2022 at 11:30  
Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Nitrate Nitrogen	2.1	0.2	mg/L		1		08/04/2022	13:00	lfs	SM 4500-NO3 F	08/04/2022	15:43	lfs
Conductivity	171	1	umhos/cm		1		08/10/2022	14:21	sta	SM 2510 B	08/10/2022	14:21	sta

DQF Flags Definition:

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

August 16, 2022

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Description : 1-14W  
Project : Dem Valley Tech

Lab No. : VI 2245889-002

Customer No.: 4016916

Sampled On : August 3, 2022 at 08:20  
Sampled By : Client

Received On : August 3, 2022 at 11:30  
Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis				
							Date	Time	Who	Method	Date	Time	Who	
<b>Dairy Analysis</b>														
Nitrate Nitrogen	6.1	0.2	mg/L		1		08/04/2022	13:00	lfs	SM 4500-NO3 F	08/04/2022	15:45	lfs	
Conductivity	352	1	umhos/cm		1		08/10/2022	14:21	sta	SM 2510 B	08/10/2022	14:21	sta	

DQF Flags Definition:

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

August 16, 2022

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Description : 1-5 N  
Project : Dem Valley Tech

Lab No. : VI 2245889-003

Customer No.: 4016916

Sampled On : August 3, 2022 at 09:35  
Sampled By : Client

Received On : August 3, 2022 at 11:30  
Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Nitrate Nitrogen	7.0	0.2	mg/L		1		08/04/2022	13:00	lfs	SM 4500-NO3 F	08/04/2022	15:48	lfs
Conductivity	292	1	umhos/cm		1		08/10/2022	14:21	sta	SM 2510 B	08/10/2022	14:21	sta

DQF Flags Definition:

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

August 16, 2022

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Description : 1-2S  
Project : Dem Valley Tech

Lab No. : VI 2245889-004

Customer No.: 4016916

Sampled On : August 3, 2022 at 09:25  
Sampled By : Client

Received On : August 3, 2022 at 11:30  
Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Nitrate Nitrogen	33.0	0.2	mg/L		1		08/04/2022	13:00	lfs	SM 4500-NO3 F	08/04/2022	15:50	lfs
Conductivity	757	1	umhos/cm		1		08/10/2022	14:21	sta	SM 2510 B	08/10/2022	14:21	sta

DQF Flags Definition:

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

August 16, 2022

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Description : 1-3  
Project : Dem Valley Tech

Lab No. : VI 2245889-005

Customer No.: 4016916

Sampled On : August 3, 2022 at 08:30  
Sampled By : Client

Received On : August 3, 2022 at 11:30  
Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Nitrate Nitrogen	2.1	0.2	mg/L		1		08/04/2022	13:00	lfs	SM 4500-NO3 F	08/04/2022	15:53	lfs
Conductivity	169	1	umhos/cm		1		08/10/2022	14:21	sta	SM 2510 B	08/10/2022	14:21	sta

DQF Flags Definition:

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

August 16, 2022

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Description : Northern Farming  
Project : Dem Valley Tech

Lab No. : VI 2245889-006

Customer No.: 4016916

Sampled On : August 3, 2022 at 08:05

Sampled By : Client

Received On : August 3, 2022 at 11:30

Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis				
							Date	Time	Who	Method	Date	Time	Who	
<b>Dairy Analysis</b>														
Nitrate Nitrogen	20.3	0.2	mg/L		1		08/04/2022	13:00	lfs	SM 4500-NO3 F	08/04/2022	16:08	lfs	
Conductivity	502	1	umhos/cm		1		08/10/2022	14:21	sta	SM 2510 B	08/10/2022	14:21	sta	

DQF Flags Definition:

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

August 16, 2022

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Description : 1-29  
Project : Dem Valley Tech

Lab No. : VI 2245889-007

Customer No.: 4016916

Sampled On : August 3, 2022 at 09:05

Sampled By : Client

Received On : August 3, 2022 at 11:30

Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis				
							Date	Time	Who	Method	Date	Time	Who	
<b>Dairy Analysis</b>														
Nitrate Nitrogen	4.6	0.2	mg/L		1		08/04/2022	13:00	lfs	SM 4500-NO3 F	08/04/2022	16:10	lfs	
Conductivity	234	1	umhos/cm		1		08/10/2022	14:21	sta	SM 2510 B	08/10/2022	14:21	sta	

DQF Flags Definition:

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

August 16, 2022

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Description : 1-11  
Project : Dem Valley Tech

Lab No. : VI 2245889-008

Customer No.: 4016916

Sampled On : August 3, 2022 at 80:40  
Sampled By : Client

Received On : August 3, 2022 at 11:30  
Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Nitrate Nitrogen	7.1	0.2	mg/L		1		08/04/2022	13:00	lfs	SM 4500-NO3 F	08/04/2022	16:13	lfs
Conductivity	286	1	umhos/cm		1		08/10/2022	14:21	sta	SM 2510 B	08/10/2022	14:21	sta

DQF Flags Definition:

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

August 16, 2022

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Description : 1-5S  
Project : Dem Valley Tech

Lab No. : VI 2245889-009

Customer No.: 4016916

Sampled On : August 3, 2022 at 08:55

Sampled By : Client

Received On : August 3, 2022 at 11:30

Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis				
							Date	Time	Who	Method	Date	Time	Who	
<b>Dairy Analysis</b>														
Nitrate Nitrogen	7.0	0.2	mg/L		1		08/04/2022	13:00	lfs	SM 4500-NO3 F	08/04/2022	16:15	lfs	
Conductivity	289	1	umhos/cm		1		08/10/2022	14:21	sta	SM 2510 B	08/10/2022	14:21	sta	

DQF Flags Definition:

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

August 16, 2022

**Valley Tech Agricultural Lab Services**

Attn: Joe O' Brien  
2120 S. "K" St.  
Tulare, CA 93274

Description : 1-2N  
Project : Dem Valley Tech

Lab No. : VI 2245889-010

Customer No.: 4016916

Sampled On : August 3, 2022 at 07:50  
Sampled By : Client

Received On : August 3, 2022 at 11:30  
Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Nitrate Nitrogen	20.3	0.2	mg/L		1		08/04/2022	13:00	lfs	SM 4500-NO3 F	08/04/2022	16:18	lfs
Conductivity	510	1	umhos/cm		1		08/10/2022	14:21	sta	SM 2510 B	08/10/2022	14:21	sta

DQF Flags Definition:

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

August 16, 2022

**Valley Tech Agricultural Lab Services**

Lab No. : VI 2245889  
Customer No. : 4016916

**Quality Control - Wet Chem**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
E. C.	2510B	08/10/2022:209013STA (VI 2245889-002)	Blank Dup	umhos/cm umhos/cm		ND 0.9%	<1 5	
Nitrate Nitrogen	4500NO3F	08/04/2022:208820LFS  (CH 2276485-001)	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	11.22 5.609 5.609 5.609	96.5% 92.2% 92.2% 0.0%	<0.2 80-120 66-125 66-125 ≤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 analyte. 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.

**Inter-Laboratory Condition Upon Receipt (Attach to COC)**

Sample Receipt at: STK CC CH VI

1. Number of ice chests/packages received: \_\_\_\_\_ Shipping tracking # OTC
2. Were samples received in a chilled condition? Temps: 1 ROI / / / /  
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 N/A  
9. Verify sample date, time and sampler name Yes No N/A

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) CD

**Sample Receipt at SP:**

1. Were samples received in a chilled condition? Temps: 2, 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: 12WY26920391752234 / 2470644

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? Yes No N/A FGL  
[Exception: Oil & Grease, VOA and CrVI verified in lab]  
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 N/A

Attach labels to the containers and include a copy of the COC for lab delivery.

Sample Receipt, Login and Verification completed by (initials): CD

**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: \_\_\_\_\_

(4016916)

Valley Tech Agricultural Lab Services

VI 2245889

iv 08/04/2022 07:22:59



U1 2245889

(Please use the back of this sheet for additional contact)