2023 ANNUAL REPORT

Prepared for

Holstein Farms

4625 Ave 176
Tulare CA 93274

Tulare County

January 01 through December 31, 2023

Prepared by:

EST. 1968
PROVOST&
PRITCHARD
CONSULTING GROUP
An Employee Owned Company

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2023 ANNUAL REPORT

Holstein Farms

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 Operator

Signature: [signature]

Print: Nick Meyendekker

Title: Owner

Date: 06/27/2024

Facility Configuration Changes or Information about this Report

Nothing significant to report.

PROVOST & PRITCHARD ENGINEERING GROUP An Employee Owned Company

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.
- ☒ The monitoring well system is part of the Central Valley Dairy Representative Monitoring Program. All monitoring well sampling, analysis, and reporting has been performed by that program.

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: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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	2,565	0	2,655	0	1,400	82.0	Holstein
Dry Cows	435	0	345	0	1,600		Holstein
Bred Heifers 15-24 Months	774	0	770	0	1,160		Holstein
Heifers 7-14 Months	786	0	783	0	685		Holstein
Calves 4-6 Months	255	0	225	0			Holstein
Calves 0-3 Months	245	0	295	0			Holstein
Other type of commercial animals							

Number of months the dairy was occupied: 12

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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	48,884	2,487	423	555
Dry Cows	4,785	218	29	144
Bred Heifers 15-24 Months	7,430	294	43	
Heifers 7-14 Months	4,677	162	26	
Calves 4-6 Months	797	33	5	
Calves 0-3 Months	448	16	3	
Other type of commercial animals				
Total Pounds for report period:		1,171,423	192,841	254,896
Total tons for report period:	12,231			

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: Holstein Farms

Dairy Address: 4625 Ave 176
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 lbs Generated				
	Total Dry Manure	Nitrogen	Phosphorus	Potassium	Salt
12,919	24,729,485	370,094	133,965	494,887	8,210,189

Estimated Total Amount of Process Wastewater and Nutrients Generated

Total Gallons of Process Wastewater Generated (1,000 gals.)	Total lbs Generated			
	Nitrogen	Phosphorus	Potassium	Salt
59,440	112,177	26,507	192,458	1,000,557

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:
Dry Tons = Tons As-Is * (100-sample moisture %) / 100

3. Solid manure nutrient pounds applied are calculated by:
Total (N,P,K,Salts) lbs = (Dry Tons)*((%N,P,K,Ash)/100)*2,000

4. Process wastewater nutrient pounds applied are calculated by:
Total (P,K,Salts) lbs = (Gallons)*(P,K,TDS mg/l)*(8.337E-06)
Total (N) lbs = (Gallons)*(NO3-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:
Inorganic N lbs = (Gallons)*(NO3-N+NH4-N mg/l)*(8.337E-06)
Organic N lbs = (Gallons)*(TKN-NH4-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 disolved 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.

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Estimated Amount of Total Solid Manure And Nutrients Applied

Total Tons (As Is) of Manure Applied	Total lbs Applied				
	Manure	Nitrogen	Phosphorus	Potassium	Salt
2,690	5,052,981	120,203	33,614	121,033	1,677,590

Estimated Amount of Total Wastewater And Nutrients Applied

Total Gallons of Process Wastewater Applied (1,000 gals.)	Total lbs Applied			
	Nitrogen	Phosphorus	Potassium	Salts
59,440	112,177	26,507	192,458	1,000,557

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Estimated Amount of Total Solid Manure And Nutrients Transferred

Total Tons (As Is) of Manure Transferred	Total lbs Transferred				
	Total Manure	Nitrogen	Phosphorus	Potassium	Salt
10,229	19,676,504	249,892	100,350	373,854	6,532,599

Estimated Amount of Total Wastewater And Nutrients Transferred

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

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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: 856.30

APN	County	Acres	Land Use	APN Not Part of Land Application Area
200-140-005	Tulare	160.00	Dairy Site/Cropland	
200-140-006	Tulare	480.00	Dairy Site/Cropland	
200-170-006	Tulare	180.00	Cropland	
200-280-006	Tulare	36.30	Cropland	

Total Land Application Areas For Manure And Wastewater

Total Land Application Area Acres: 573.0

Total Acres With Manure Applied For This Report: 573.0

Total Acres Without Manure Applied For This Report: 0.0

Field ID	Acres	APN	Type of Waste Applied For This Report	Field Not Part of Land Application Area
01	147.0	200-140-006	Both	
02	38.0	200-170-006	Both	
03	36.0	200-170-006	Liquid	
04	20.0	200-170-006	Both	
05	80.0	200-170-006	Both	
06	111.0	200-140-005	Both	

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field ID	Acres	APN	Type of Waste Applied For This Report	Field Not Part of Land Application Area
		200-140-006		
07	93.0	200-140-005 200-140-006	Liquid	
08	15.0	200-140-006	Both	
BR-1	33.0	200-280-006	Solid	

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
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)

Field Information		
Field ID	**01**	**01**
Crop	**Triticale**	**Corn Silage**
Expected Yield (tons/ac)	20	25
Acres	147	147
Start Date	10/27/2022	6/02/2023
Applications		
Commercial		
Solid Manure		
Total Applied	246	
PAN Applied	47	71
Lagoon Water		
Total Applied	104	142
PAN Applied	77	104
Irrigation Source	0	0
Atmospheric	7	7
Removal		
Planned Harvest		
Actual Harvest	291	220
Balance Ratio		
By Crop		
Total	1.23	0.68
PAN	0.45	0.83
By Field		
Total	0.99	0.99
PAN	0.61	0.61
By Farm		
Total	1.05	1.05
PAN	0.76	0.76

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: Holstein Farms

Dairy Address: 4625 Ave 176
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)

Field Information		
Field ID	**02**	**02**
Crop	**Triticale**	**Corn Silage**
Expected Yield (tons/ac)	20	25
Acres	38	38
Start Date	10/24/2022	6/07/2023
Applications		
Commercial		
Solid Manure		
Total Applied	244	122
PAN Applied	70	151
Lagoon Water		
Total Applied	189	
PAN Applied	135	36
Irrigation Source	7	55
Atmospheric	7	7
Removal		
Planned Harvest		
Actual Harvest	378	189
Balance Ratio		
By Crop		
Total	1.18	0.98
PAN	0.58	1.32
By Field		
Total	1.11	1.11
PAN	0.82	0.82
By Farm		
Total	1.05	1.05
PAN	0.76	0.76

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: Holstein Farms

Dairy Address: 4625 Ave 176
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)

Field Information		
Field ID	**03**	**03**
Crop	**Triticale**	**Corn Silage**
Expected Yield (tons/ac)	20	25
Acres	36	36
Start Date	10/24/2022	6/17/2023
Applications		
Commercial		
Solid Manure		
Total Applied		
PAN Applied	40	85
Lagoon Water		
Total Applied	335	
PAN Applied	219	36
Irrigation Source	10	57
Atmospheric	7	7
Removal		
Planned Harvest		
Actual Harvest	284	150
Balance Ratio		
By Crop		
Total	1.24	0.43
PAN	0.97	1.23
By Field		
Total	0.96	0.96
PAN	1.06	1.06
By Farm		
Total	1.05	1.05
PAN	0.76	0.76

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: Holstein Farms

Dairy Address: 4625 Ave 176
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)

Field Information		
Field ID	**04**	**04**
Crop	**Triticale**	**Corn Silage**
Expected Yield (tons/ac)	20	25
Acres	20	20
Start Date	10/03/2022	6/02/2023
Applications		
Commercial		
Solid Manure		
Total Applied	258	
PAN Applied	68	124
Lagoon Water		
Total Applied	148	
PAN Applied	100	18
Irrigation Source	10	59
Atmospheric	7	7
Removal		
Planned Harvest		
Actual Harvest	301	129
Balance Ratio		
By Crop		
Total	1.40	0.51
PAN	0.61	1.61
By Field		
Total	1.14	1.14
PAN	0.91	0.91
By Farm		
Total	1.05	1.05
PAN	0.76	0.76

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: Holstein Farms

Dairy Address: 4625 Ave 176
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)

Field Information		
Field ID	**05**	**05**
Crop	**Triticale**	**Corn Silage**
Expected Yield (tons/ac)	20	25
Acres	80	80
Start Date	10/04/2022	6/12/2023
Applications		
Commercial		
Solid Manure		
Total Applied	258	
PAN Applied	65	118
Lagoon Water		
Total Applied	93	
PAN Applied	68	28
Irrigation Source	4	53
Atmospheric	7	7
Removal		
Planned Harvest		
Actual Harvest	277	198
Balance Ratio		
By Crop		
Total	1.31	0.30
PAN	0.52	1.04
By Field		
Total	0.89	0.89
PAN	0.74	0.74
By Farm		
Total	1.05	1.05
PAN	0.76	0.76

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: Holstein Farms

Dairy Address: 4625 Ave 176
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)

Field Information		
Field ID	**06**	**06**
Crop	**Triticale**	**Corn Silage**
Expected Yield (tons/ac)	20	25
Acres	111	111
Start Date	10/29/2022	6/17/2023
Applications		
Commercial		
Solid Manure		
Total Applied	256	
PAN Applied	45	71
Lagoon Water		
Total Applied		108
PAN Applied	9	75
Irrigation Source	0	0
Atmospheric	7	7
Removal		
Planned Harvest		
Actual Harvest	203	169
Balance Ratio		
By Crop		
Total	1.29	0.68
PAN	0.30	0.91
By Field		
Total	1.02	1.02
PAN	0.58	0.58
By Farm		
Total	1.05	1.05
PAN	0.76	0.76

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: Holstein Farms

Dairy Address: 4625 Ave 176
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)

Field Information		
Field ID	**07**	**07**
Crop	**Triticale**	**Corn Silage**
Expected Yield (tons/ac)	20	25
Acres	93	93
Start Date	10/25/2022	6/03/2023
Applications		
Commercial		
Solid Manure		
Total Applied		
PAN Applied	26	30
Lagoon Water		
Total Applied	228	108
PAN Applied	146	99
Irrigation Source	0	0
Atmospheric	7	7
Removal		
Planned Harvest		
Actual Harvest	225	204
Balance Ratio		
By Crop		
Total	1.05	0.56
PAN	0.79	0.67
By Field		
Total	0.82	0.82
PAN	0.74	0.74
By Farm		
Total	1.05	1.05
PAN	0.76	0.76

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: Holstein Farms

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Report Period: Jan 01 through Dec 31, 2023

Attachment C

Nitrogen Balance Ratio - Applied to Removed

(Nitrogen values presented as lbs/acre)

Field Information		
Field ID	**08**	**08**
Crop	**Triticale**	**Corn Silage**
Expected Yield (tons/ac)	20	25
Acres	15	15
Start Date	11/17/2022	6/02/2023
Applications		
Commercial		
Solid Manure		
Total Applied	258	
PAN Applied	39	59
Lagoon Water		
Total Applied	211	
PAN Applied	133	13
Irrigation Source	0	154
Atmospheric	7	7
Removal		
Planned Harvest		
Actual Harvest	340	187
Balance Ratio		
By Crop		
Total	1.40	0.86
PAN	0.53	1.25
By Field		
Total	1.21	1.21
PAN	0.78	0.78
By Farm		
Total	1.05	1.05
PAN	0.76	0.76

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: Holstein Farms

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Report Period: Jan 01 through Dec 31, 2023

Attachment C

Nitrogen Balance Ratio - Applied to Removed

(Nitrogen values presented as lbs/acre)

Field Information	
Field ID	**BR-1**
Crop	**Alfalfa**
Expected Yield (tons/ac)	15
Acres	33
Start Date	10/23/2022
Applications	
Commercial	
Solid Manure	
Total Applied	366
PAN Applied	6
Lagoon Water	
Total Applied	
PAN Applied	
Irrigation Source	321
Atmospheric	14
Removal	
Planned Harvest	
Actual Harvest	556
Balance Ratio	
By Crop	
Total	1.26
PAN	0.61
By Field	
Total	1.26
PAN	0.61
By Farm	
Total	1.05
PAN	0.76

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: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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	
01	Triticale	147.00	10/27/2022		05/09/2023	20	25.39	3,732
01	Corn Silage	147.00	06/02/2023		09/28/2023	25	28.55	4,197
02	Triticale	38.00	10/24/2022		05/08/2023	20	27.24	1,035
02	Corn Silage	38.00	06/07/2023		09/29/2023	25	26.66	1,013
03	Triticale	36.00	10/24/2022		05/08/2023	20	23.86	859
03	Corn Silage	36.00	06/17/2023		09/29/2023	25	24.72	890
04	Triticale	20.00	10/03/2022		05/09/2023	20	19.70	394
04	Corn Silage	20.00	06/02/2023		09/30/2023	25	19.40	388
05	Triticale	80.00	10/04/2022		05/09/2023	20	24.35	1,948
05	Corn Silage	80.00	06/12/2023		09/30/2023	25	27.74	2,219
06	Triticale	111.00	10/29/2022		05/11/2023	20	19.55	2,170
06	Corn Silage	111.00	06/17/2023		10/03/2023	25	26.31	2,920
07	Triticale	93.00	10/25/2022		05/10/2023	20	20.95	1,948
07	Corn Silage	93.00	06/03/2023		09/27/2023	25	26.34	2,450
08	Triticale	15.00	11/17/2022		05/08/2023	20	21.53	323
08	Corn Silage	15.00	06/02/2023		09/28/2023	25	22.33	335
BR-1	Alfalfa	33.00	10/23/2022	X	09/09/2023	15	8.00	264

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
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
01	Triticale	5/09/2023	3,732	1,227		67.13	1.75	0.26	1.75	42,935	6,379	42,935
					18-23-P-17	67.13	1.75	0.26	1.75			
01	Corn Silage	9/28/2023	4,197	1,389		66.91	1.16	0.20	1.37	32,220	5,555	38,053
					18-23-P-9	66.91	1.16	0.20	1.37			
02	Triticale	5/08/2023	1,035	399		61.48	1.80	0.27	1.88	14,353	2,153	14,990
					18-23-P-2	61.48	1.80	0.27	1.88			
02	Corn Silage	9/29/2023	1,013	294		70.93	1.21	0.29	1.45	7,126	1,708	8,540
					18-23-P-10	70.93	1.21	0.29	1.45			
03	Triticale	5/08/2023	859	291		66.08	1.75	0.26	1.72	10,198	1,515	10,023
					18-23-P-18	66.08	1.75	0.26	1.72			
03	Corn Silage	9/29/2023	890	289		67.58	0.94	0.29	1.25	5,425	1,674	7,213
					18-23-P-11	67.58	0.94	0.29	1.25			
04	Triticale	5/09/2023	394	172		56.40	1.75	0.30	2.02	6,012	1,031	6,940
					18-23-P-19	56.40	1.75	0.30	2.02			
04	Corn Silage	9/30/2023	388	105		73.00	1.24	0.29	1.62	2,598	608	3,394
					18-23-P-12	73.00	1.24	0.29	1.62			
05	Triticale	5/09/2023	1,948	628		67.77	1.75	0.27	1.89	21,974	3,390	23,732
					18-23-P-20	67.77	1.75	0.27	1.89			
05	Corn Silage	9/30/2023	2,219	723		67.40	1.10	0.26	1.55	15,915	3,762	22,425
					18-23-P-13	67.40	1.10	0.26	1.55			
06	Triticale	5/11/2023	2,170	646		70.24	1.75	0.32	2.04	22,603	4,133	26,348
					18-23-P-21	70.24	1.75	0.32	2.04			
06	Corn Silage	10/03/2023	2,920	847		70.99	1.11	0.19	1.55	18,805	3,219	26,260
					18-23-P-14	70.99	1.11	0.19	1.55			
07	Triticale	5/10/2023	1,948	484		75.16	2.16	0.40	2.87	20,904	3,871	27,775
					18-23-P-7	75.16	2.16	0.40	2.87			
07	Corn Silage	9/27/2023	2,450	810		66.93	1.17	0.17	1.80	18,959	2,755	29,168
					18-23-P-15	66.93	1.17	0.17	1.80			
08	Triticale	5/08/2023	323	119		63.20	2.15	0.35	2.33	5,111	832	5,539
					18-23-P-8	63.20	2.15	0.35	2.33			
08	Corn Silage	9/28/2023	335	120		64.15	1.17	0.16	1.99	2,810	384	4,780

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
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
					18-23-P-16	64.15	1.17	0.16	1.99			
BR-1	Alfalfa	9/09/2023	264	209		20.99	3.40	0.30	2.14	14,184	1,265	8,914
					18-22-P-9	9.38	3.86	0.39	2.24			
					18-22-P-10	6.93	3.40	0.32	2.64			
					18-22-P-21	46.66	2.94	0.20	1.53			

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
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: 01
Crop: Triticale

Total Nutrients Applied To This Crop:

Nitrogen	51,243	**lbs**
Phosphorus	12,933	**lbs**
Potassium	62,140	**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
10/01/2022	700	652		**6.850**	**2.770**	**0.720**	**2.570**	36,124	9,390	33,515
			18-22-M-2	6.850	2.770	0.720	2.570			
Totals =	**700**	**652**						**36,124**	**9,390**	**33,515**

Wastewater Applications:

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No_3-N	TKN	P	K	N	P	K
11/15/2022	7,200		**0.00**	**253**	**59.3**	**479.0**	15,119	3,544	28,625
		18-22-L-4	0.00	253	59.3	479.0			
Total =	**7,200**						**15,119**	**3,544**	**28,625**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 01

Crop: Triticale

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_3-N	NH_4-N	TKN	
11/17/2022	15,000							0.0
	15,000	18-22-W-10	Well 3	Well				0.0
Total =	**15,000**							**0.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 01

Crop: Corn Silage

Total Nutrients Applied To This Crop:

Nitrogen	20,617	**lbs**
Phosphorus	4,639	**lbs**
Potassium	31,150	**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
06/01/2023	9,000		**0.00**	**276**	**62.1**	**417.0**	20,617	4,639	31,150
		18-23-L-2	0.00	276	62.1	417.0			
Total =	**9,000**						**20,617**	**4,639**	**31,150**

Irrigation Applications:

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 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_3-N	NH_4-N	TKN	
6/01/2023	11,500							0.0
	11,500	18-23-W-6	Well 3	Well				0.0
7/01/2023	16,500							0.0
	16,500	18-23-W-6	Well 3	Well				0.0
7/12/2023	16,500							0.0
	16,500	18-23-W-6	Well 3	Well				0.0
7/24/2023	16,500							0.0
	16,500	18-23-W-6	Well 3	Well				0.0
8/05/2023	16,500							0.0
	16,500	18-23-W-6	Well 3	Well				0.0
8/17/2023	12,000							0.0
	12,000	18-23-W-6	Well 3	Well				0.0
8/29/2023	12,000							0.0
	12,000	18-23-W-6	Well 3	Well				0.0
Total =	**101,500**							**0.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 02

Crop: Triticale

Total Nutrients Applied To This Crop:

Nitrogen	16,685	**lbs**
Phosphorus	4,088	**lbs**
Potassium	22,136	**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
10/02/2022	180	168		**6.850**	**2.770**	**0.720**	**2.570**	9,289	2,414	8,618
			18-22-M-2	6.850	2.770	0.720	2.570			
Totals =	**180**	**168**						**9,289**	**2,414**	**8,618**

Wastewater Applications:

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No_3-N	TKN	P	K	N	P	K
10/28/2022	3,400		**0.00**	**253**	**59.3**	**479.0**	7,140	1,673	13,517
		18-22-L-4	0.00	253	59.3	479.0			
Total =	**3,400**						**7,140**	**1,673**	**13,517**

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_3-N	NH_4-N	TKN	
10/28/2022	2,000							256.0
	2,000	18-22-W-12	Well 5	Well	15.30			256.0
Total =	**2,000**							**256.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 02

Crop: Corn Silage

Total Nutrients Applied To This Crop:

Nitrogen	6,544	**lbs**
Phosphorus	1,864	**lbs**
Potassium	6,944	**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
06/01/2023	190	183		**3.820**	**1.270**	**0.510**	**1.900**	4,642	1,864	6,944
			18-23-M-1	3.820	1.270	0.510	1.900			
Totals =	**190**	**183**						**4,642**	**1,864**	**6,944**

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: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 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_3-N	NH_4-N	TKN	
6/01/2023	5,200							272.9
	3,100	18-23-W-7	Well 4	Well	0.20			6.2
	2,100	18-23-W-8	Well 5	Well	15.20			266.7
7/01/2023	5,200							272.9
	3,100	18-23-W-7	Well 4	Well	0.20			6.2
	2,100	18-23-W-8	Well 5	Well	15.20			266.7
7/12/2023	4,600							271.7
	2,500	18-23-W-7	Well 4	Well	0.20			5.0
	2,100	18-23-W-8	Well 5	Well	15.20			266.7
7/24/2023	4,600							271.7
	2,500	18-23-W-7	Well 4	Well	0.20			5.0
	2,100	18-23-W-8	Well 5	Well	15.20			266.7
8/05/2023	4,300							271.1
	2,200	18-23-W-7	Well 4	Well	0.20			4.4
	2,100	18-23-W-8	Well 5	Well	15.20			266.7
8/17/2023	4,300							271.1
	2,200	18-23-W-7	Well 4	Well	0.20			4.4
	2,100	18-23-W-8	Well 5	Well	15.20			266.7
8/29/2023	4,300							271.1
	2,200	18-23-W-7	Well 4	Well	0.20			4.4
	2,100	18-23-W-8	Well 5	Well	15.20			266.7
Total =	**32,500**							**1,902.5**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 03

Crop: Triticale

Total Nutrients Applied To This Crop:

Nitrogen	12,328	**lbs**
Phosphorus	2,805	**lbs**
Potassium	22,661	**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_3-N	TKN	P	K	N	P	K
11/01/2022	5,700		**0.00**	**253**	**59.3**	**479.0**	11,969	2,805	22,661
		18-22-L-4	0.00	253	59.3	479.0			
Total =	**5,700**						**11,969**	**2,805**	**22,661**

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_3-N	NH_4-N	TKN	
11/01/2022	2,800							358.4
	2,800	18-22-W-12	Well 5	Well	15.30			358.4
Total =	**2,800**							**358.4**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 03

Crop: Corn Silage

Total Nutrients Applied To This Crop:

Nitrogen	1,964	**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		
			No3-N	TKN	P	K	N	P	K
Total =									

Irrigation Applications:

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 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_3-N	NH_4-N	TKN	
6/06/2023	6,200							412.4
	3,000	18-23-W-7	Well 4	Well	0.20			6.0
	3,200	18-23-W-8	Well 5	Well	15.20			406.4
7/06/2023	4,300							258.6
	2,300	18-23-W-7	Well 4	Well	0.20			4.6
	2,000	18-23-W-8	Well 5	Well	15.20			254.0
7/18/2023	4,300							258.6
	2,300	18-23-W-7	Well 4	Well	0.20			4.6
	2,000	18-23-W-8	Well 5	Well	15.20			254.0
7/29/2023	4,300							258.6
	2,300	18-23-W-7	Well 4	Well	0.20			4.6
	2,000	18-23-W-8	Well 5	Well	15.20			254.0
8/10/2023	4,300							258.6
	2,300	18-23-W-7	Well 4	Well	0.20			4.6
	2,000	18-23-W-8	Well 5	Well	15.20			254.0
8/22/2023	4,300							258.6
	2,300	18-23-W-7	Well 4	Well	0.20			4.6
	2,000	18-23-W-8	Well 5	Well	15.20			254.0
9/02/2023	4,300							258.6
	2,300	18-23-W-7	Well 4	Well	0.20			4.6
	2,000	18-23-W-8	Well 5	Well	15.20			254.0
Total =	**32,000**							**1,964.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 04

Crop: Triticale

Total Nutrients Applied To This Crop:

Nitrogen	8,292	**lbs**
Phosphorus	2,030	**lbs**
Potassium	10,354	**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
10/03/2022	100	93		**6.850**	**2.770**	**0.720**	**2.570**	5,161	1,341	4,788
			18-22-M-2	6.850	2.770	0.720	2.570			
Totals =	**100**	**93**						**5,161**	**1,341**	**4,788**

Wastewater Applications:

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No_3-N	TKN	P	K	N	P	K
10/25/2022	1,400		**0.00**	**253**	**59.3**	**479.0**	2,940	689	5,566
		18-22-L-4	0.00	253	59.3	479.0			
Total =	**1,400**						**2,940**	**689**	**5,566**

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_3-N	NH_4-N	TKN	
10/25/2022	1,500							192.0
	1,500	18-22-W-12	Well 5	Well	15.30			192.0
Total =	**1,500**							**192.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 04

Crop: Corn Silage

Total Nutrients Applied To This Crop:

Nitrogen	1,187	**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		
			No3-N	TKN	P	K	N	P	K
Total =									

Irrigation Applications:

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 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_3-N	NH_4-N	TKN	
6/10/2023	2,800							180.6
	1,400	18-23-W-7	Well 4	Well	0.20			2.8
	1,400	18-23-W-8	Well 5	Well	15.20			177.8
7/10/2023	2,800							180.6
	1,400	18-23-W-7	Well 4	Well	0.20			2.8
	1,400	18-23-W-8	Well 5	Well	15.20			177.8
7/22/2023	2,800							180.6
	1,400	18-23-W-7	Well 4	Well	0.20			2.8
	1,400	18-23-W-8	Well 5	Well	15.20			177.8
8/02/2023	2,800							180.6
	1,400	18-23-W-7	Well 4	Well	0.20			2.8
	1,400	18-23-W-8	Well 5	Well	15.20			177.8
8/14/2023	2,400							154.8
	1,200	18-23-W-7	Well 4	Well	0.20			2.4
	1,200	18-23-W-8	Well 5	Well	15.20			152.4
8/25/2023	2,400							154.8
	1,200	18-23-W-7	Well 4	Well	0.20			2.4
	1,200	18-23-W-8	Well 5	Well	15.20			152.4
9/04/2023	2,400							154.8
	1,200	18-23-W-7	Well 4	Well	0.20			2.4
	1,200	18-23-W-8	Well 5	Well	15.20			152.4
Total =	**18,400**							**1,186.8**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 05

Crop: Triticale

Total Nutrients Applied To This Crop:

Nitrogen	28,100	**lbs**
Phosphorus	7,567	**lbs**
Potassium	33,693	**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
10/04/2022	400	373		**6.850**	**2.770**	**0.720**	**2.570**	20,642	5,365	19,152
			18-22-M-2	6.850	2.770	0.720	2.570			
Totals =	**400**	**373**						**20,642**	**5,365**	**19,152**

Wastewater Applications:

Date	Total Gal (1,000 Gal)	Sample ID	Conc. from Sample Analysis (mg/l)				Total Pounds Applied		
			No_3-N	TKN	P	K	N	P	K
11/05/2022	4,000		**0.00**	**215**	**66.3**	**438.0**	7,138	2,201	14,542
		18-23-L-1	0.00	215	66.3	438.0			
Total =	**4,000**						**7,138**	**2,201**	**14,542**

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_3-N	NH_4-N	TKN	
11/05/2022	2,500							320.0
	2,500	18-22-W-12	Well 5	Well	15.30			320.0
Total =	**2,500**							**320.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 05

Crop: Corn Silage

Total Nutrients Applied To This Crop:

Nitrogen	4,444	**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		
			No3-N	TKN	P	K	N	P	K
Total =									

Irrigation Applications:

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 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_3-N	NH_4-N	TKN	
6/10/2023	10,700							708.9
	5,200	18-23-W-7	Well 4	Well	0.20			10.4
	5,500	18-23-W-8	Well 5	Well	15.20			698.5
7/01/2023	10,700							708.9
	5,200	18-23-W-7	Well 4	Well	0.20			10.4
	5,500	18-23-W-8	Well 5	Well	15.20			698.5
7/12/2023	10,700							708.9
	5,200	18-23-W-7	Well 4	Well	0.20			10.4
	5,500	18-23-W-8	Well 5	Well	15.20			698.5
7/24/2023	8,500							579.5
	4,000	18-23-W-7	Well 4	Well	0.20			8.0
	4,500	18-23-W-8	Well 5	Well	15.20			571.5
8/05/2023	8,500							579.5
	4,000	18-23-W-7	Well 4	Well	0.20			8.0
	4,500	18-23-W-8	Well 5	Well	15.20			571.5
8/17/2023	8,500							579.5
	4,000	18-23-W-7	Well 4	Well	0.20			8.0
	4,500	18-23-W-8	Well 5	Well	15.20			571.5
8/29/2023	8,300							579.1
	3,800	18-23-W-7	Well 4	Well	0.20			7.6
	4,500	18-23-W-8	Well 5	Well	15.20			571.5
Total =	**65,900**							**4,444.3**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 06

Crop: Triticale

Total Nutrients Applied To This Crop:

Nitrogen	28,383	**lbs**
Phosphorus	7,377	**lbs**
Potassium	26,334	**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
10/05/2022	550	512		**6.850**	**2.770**	**0.720**	**2.570**	28,383	7,377	26,334
			18-22-M-2	6.850	2.770	0.720	2.570			
Totals =	**550**	**512**						**28,383**	**7,377**	**26,334**

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: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 06

Crop: Triticale

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO_3-N	NH_4-N	TKN	
11/24/2022	11,000							0.0
	5,500	18-23-W-4	Well 1	Well				0.0
	5,500	18-23-W-10	Well 7	Well				0.0
4/18/2023	11,000							0.0
	5,500	18-23-W-4	Well 1	Well				0.0
	5,500	18-23-W-10	Well 7	Well				0.0
Total =	**22,000**							**0.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 06

Crop: Corn Silage

Total Nutrients Applied To This Crop:

Nitrogen	11,904	**lbs**
Phosphorus	2,087	**lbs**
Potassium	15,346	**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
09/05/2023	8,640		**0.00**	**166**	**29.1**	**214.0**	11,904	2,087	15,346
		18-23-L-4	0.00	166	29.1	214.0			
Total =	**8,640**						**11,904**	**2,087**	**15,346**

Irrigation Applications:

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 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_3-N	NH_4-N	TKN	
6/09/2023	17,000							0.0
	8,500	18-23-W-4	Well 1	Well				0.0
	8,500	18-23-W-10	Well 7	Well				0.0
7/08/2023	17,000							0.0
	8,500	18-23-W-4	Well 1	Well				0.0
	8,500	18-23-W-10	Well 7	Well				0.0
7/20/2023	17,000							0.0
	8,500	18-23-W-4	Well 1	Well				0.0
	8,500	18-23-W-10	Well 7	Well				0.0
8/01/2023	16,000							0.0
	7,500	18-23-W-4	Well 1	Well				0.0
	8,500	18-23-W-10	Well 7	Well				0.0
8/13/2023	15,000							0.0
	7,500	18-23-W-4	Well 1	Well				0.0
	7,500	18-23-W-10	Well 7	Well				0.0
8/25/2023	15,000							0.0
	7,500	18-23-W-4	Well 1	Well				0.0
	7,500	18-23-W-10	Well 7	Well				0.0
9/05/2023	8,000							0.0
	4,000	18-23-W-4	Well 1	Well				0.0
	4,000	18-23-W-10	Well 7	Well				0.0
Total =	**105,000**							**0.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 07

Crop: Triticale

Total Nutrients Applied To This Crop:

Nitrogen	20,343	**lbs**
Phosphorus	6,273	**lbs**
Potassium	41,444	**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
04/14/2023	5,700		**0.00**	**215**	**66.3**	**438.0**	10,172	3,137	20,722
		18-23-L-1	0.00	215	66.3	438.0			
04/10/2023	5,700		**0.00**	**215**	**66.3**	**438.0**	10,172	3,137	20,722
		18-23-L-1	0.00	215	66.3	438.0			
Total =	**11,400**						**20,343**	**6,273**	**41,444**

Irrigation Applications:

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 07

Crop: Triticale

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO_3-N	NH_4-N	TKN	
11/17/2022	11,000							0.0
	5,500	18-23-W-4	Well 1	Well				0.0
	5,500	18-23-W-10	Well 7	Well				0.0
4/10/2023	11,000							0.0
	5,500	18-23-W-4	Well 1	Well				0.0
	5,500	18-23-W-10	Well 7	Well				0.0
4/14/2023	11,000							0.0
	5,500	18-23-W-4	Well 1	Well				0.0
	5,500	18-23-W-10	Well 7	Well				0.0
Total =	**33,000**							**0.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 07

Crop: Corn Silage

Total Nutrients Applied To This Crop:

Nitrogen	9,920	**lbs**
Phosphorus	1,739	**lbs**
Potassium	12,789	**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
08/16/2023	7,200		**0.00**	**166**	**29.1**	**214.0**	9,920	1,739	12,789
		18-23-L-4	0.00	166	29.1	214.0			
Total =	**7,200**						**9,920**	**1,739**	**12,789**

Irrigation Applications:

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 07

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_3-N	NH_4-N	TKN	
6/01/2023	13,000							0.0
	6,500	18-23-W-4	Well 1	Well				0.0
	6,500	18-23-W-10	Well 7	Well				0.0
7/01/2023	13,000							0.0
	6,500	18-23-W-4	Well 1	Well				0.0
	6,500	18-23-W-10	Well 7	Well				0.0
7/12/2023	13,000							0.0
	6,500	18-23-W-4	Well 1	Well				0.0
	6,500	18-23-W-10	Well 7	Well				0.0
7/24/2023	13,000							0.0
	6,500	18-23-W-4	Well 1	Well				0.0
	6,500	18-23-W-10	Well 7	Well				0.0
8/04/2023	12,000							0.0
	6,000	18-23-W-4	Well 1	Well				0.0
	6,000	18-23-W-10	Well 7	Well				0.0
8/16/2023	7,000							0.0
	3,500	18-23-W-4	Well 1	Well				0.0
	3,500	18-23-W-10	Well 7	Well				0.0
8/28/2023	11,000							0.0
	5,500	18-23-W-4	Well 1	Well				0.0
	5,500	18-23-W-10	Well 7	Well				0.0
Total =	**82,000**							**0.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 08

Crop: Triticale

Total Nutrients Applied To This Crop:

Nitrogen	7,020	**lbs**
Phosphorus	1,744	**lbs**
Potassium	9,554	**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
10/03/2022	75	70		**6.850**	**2.770**	**0.720**	**2.570**	3,870	1,006	3,591
			18-22-M-2	6.850	2.770	0.720	2.570			
Totals =	**75**	**70**						**3,870**	**1,006**	**3,591**

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
10/25/2022	1,500		**0.00**	**253**	**59.3**	**479.0**	3,150	738	5,964
		18-22-L-4	0.00	253	59.3	479.0			
Total =	**1,500**						**3,150**	**738**	**5,964**

Irrigation Applications:

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 08

Crop: Triticale

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO_3-N	NH_4-N	TKN	
10/25/2022	800							0.0
	800	18-23-W-4	Well 1	Well				0.0
4/10/2023	1,600							0.0
	1,600	18-23-W-4	Well 1	Well				0.0
Total =	**2,400**							**0.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 08

Crop: Corn Silage

Total Nutrients Applied To This Crop:

Nitrogen	2,310	**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		
			No3-N	TKN	P	K	N	P	K
Total =									

Irrigation Applications:

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: 08

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_3-N	NH_4-N	TKN	
6/01/2023	2,100							321.3
	2,100	18-23-W-1	Well F1	Well	18.30			321.3
7/01/2023	2,100							321.3
	2,100	18-23-W-1	Well F1	Well	18.30			321.3
7/10/2023	2,100							321.3
	2,100	18-23-W-1	Well F1	Well	18.30			321.3
7/20/2023	1,800							275.4
	1,800	18-23-W-1	Well F1	Well	18.30			275.4
7/31/2023	1,800							275.4
	1,800	18-23-W-1	Well F1	Well	18.30			275.4
8/10/2023	1,800							275.4
	1,800	18-23-W-1	Well F1	Well	18.30			275.4
8/21/2023	1,800							275.4
	1,800	18-23-W-1	Well F1	Well	18.30			275.4
9/01/2023	1,600							244.8
	1,600	18-23-W-1	Well F1	Well	18.30			244.8
Total =	**15,100**							**2,310.3**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: BR-1
Crop: Alfalfa

Total Nutrients Applied To This Crop:

Nitrogen	22,683	**lbs**
Phosphorus	4,856	**lbs**
Potassium	18,091	**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
09/17/2023	495	476		**3.820**	**1.270**	**0.510**	**1.900**	12,093	4,856	18,091
			18-23-M-1	3.820	1.270	0.510	1.900			
Totals =	**495**	**476**						**12,093**	**4,856**	**18,091**

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: Holstein Farms

Dairy Address: 4625 Ave 176

Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Field: BR-1

Crop: Alfalfa

Date	Total Gal (1,000 Gal)	Sample ID	Source ID	Source Type	Conc. from Sample Analysis (mg/l)			Total Pounds N Applied
					NO_3-N	NH_4-N	TKN	
1/16/2023	3,500							1,235.5
	3,500	18-22-W-3	Well BD1	Well	42.30			1,235.5
4/24/2023	5,500							1,941.5
	5,500	18-22-W-3	Well BD1	Well	42.30			1,941.5
6/19/2023	5,500							1,941.5
	5,500	18-22-W-3	Well BD1	Well	42.30			1,941.5
7/20/2023	6,500							2,294.5
	6,500	18-22-W-3	Well BD1	Well	42.30			2,294.5
8/14/2023	4,500							1,588.5
	4,500	18-22-W-3	Well BD1	Well	42.30			1,588.5
9/11/2023	4,500							1,588.5
	4,500	18-22-W-3	Well BD1	Well	42.30			1,588.5
Total =	**30,000**							**10,590.0**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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
01	10/01/2022	Manure	Nominal	Nominal	Nominal
01	11/15/2022	Process Wastewater	Nominal	Nominal	Nominal
01	06/01/2023	Process Wastewater	Nominal	Nominal	Nominal
02	10/02/2022	Manure	Nominal	Nominal	Nominal
02	06/01/2023	Manure	Nominal	Nominal	Nominal
02	10/28/2022	Process Wastewater	Nominal	Nominal	Nominal
03	11/01/2022	Process Wastewater	Nominal	Nominal	Nominal
04	10/03/2022	Manure	Nominal	Nominal	Nominal
04	10/25/2022	Process Wastewater	Nominal	Nominal	Nominal
05	10/04/2022	Manure	Nominal	Nominal	Nominal
05	11/05/2022	Process Wastewater	Nominal	Nominal	Nominal
06	10/05/2022	Manure	Nominal	Nominal	Nominal
06	09/05/2023	Process Wastewater	Nominal	Nominal	Nominal
07	04/10/2023	Process Wastewater	Nominal	Nominal	Nominal
07	04/14/2023	Process Wastewater	Nominal	Nominal	Nominal
07	08/16/2023	Process Wastewater	Nominal	Nominal	Nominal
08	10/03/2022	Manure	Nominal	Nominal	Nominal
08	10/25/2022	Process Wastewater	Nominal	Nominal	Nominal
BR-1	09/17/2023	Manure	Nominal	Nominal	Nominal

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

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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
8/29/2023	2,837	2,729	18-23-M-1	3.820	1.270	0.510	1.900			
				3.820	**1.270**	**0.510**	**1.900**	**69,307**	**27,832**	**103,688**
9/20/2023	1,012	973	18-23-M-1	3.820	1.270	0.510	1.900			
				3.820	**1.270**	**0.510**	**1.900**	**24,723**	**9,928**	**36,987**
9/23/2023	1,800	1,731	18-23-M-1	3.820	1.270	0.510	1.900			
				3.820	**1.270**	**0.510**	**1.900**	**43,973**	**17,659**	**65,787**
10/18/2023	4,580	4,405	18-23-M-1	3.820	1.270	0.510	1.900			
				3.820	**1.270**	**0.510**	**1.900**	**111,888**	**44,931**	**167,392**
Grand Total / Average	**10,229**	**9,838**		**3.820**	**1.270**	**0.510**	**1.900**	**249,892**	**100,350**	**373,854**

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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
05/25/2023	Corral	18-23-M-1	3.82 0.01	1.27 0.10	0.51 0.01	1.90 0.01
12/04/2023	Corral	18-23-M-2	4.29 0.01	3.30 0.10	2.04 0.01	0.59 0.01
Average			**4.06**	**2.29**	**1.28**	**1.25**

Manure General Mineral Analysis

Required Once Every Two Years Last Analysis Date: 5/9/2022

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

Notes: Laboratory detection limit listed below each result.

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Wastewater Samples

(NO_3-N required only if lagoon is aerated)

Sample Date	Source Location	Sample ID	Location Aerated?	Total (mg/l)						EC (umhos/cm)
				NO_3 - N	NH_4 - N	TKN	P	K	TDS	
03/29/2023	Storage 1	18-23-L-1	N	0.10	167.0 0.5	215 1	66.3 0.1	438.0 0.5	2,210 10	4,300 10.00
05/25/2023	Storage 1	18-23-L-2	N	0.10	194.0 0.5	276 1	62.1 0.1	417.0 0.5	2,140 10	5,110 10.00
07/18/2023	Storage 1	18-23-L-4	N	0.10	131.0 0.5	166 1	29.1 0.1	214.0 0.5	1,400 10	2,740 10.00
12/04/2023	Storage 1	18-23-L-3	N	0.10	127.0 0.5	158 1	51.8 0.1	103.0 0.5	1,800 10	2,810 10.00
Averages					**154.8**	**204**	**52.3**	**293.0**	**1,888**	**3,740**

Wastewater General Minerals Analysis

Required Once Every Two Years Last Analysis Date: 3/1/2022

Sample Date	Source Location	Sample ID	CO_3 (mg/l)	HCO_3 (mg/l)	Cl (mg/l)	SO_4-S (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)

Notes: Laboratory detection limit listed below each result.

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Water Supply Samples

(NH_4-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_3-N (mg/l)	NH_4-N (mg/l)	TKN (mg/l)	Notes
7/18/2023	Well 1	Well	Active	18-23-W-4	Wet	7/23/2019	250 10.00	< 0.10			
7/18/2023	Well 2	Well	Active	18-23-W-5	Wet	8/09/2019	394 10.00	2.2 0.10			
7/18/2023	Well 3	Well	Active	18-23-W-6	Wet	7/23/2019	265 10.00	< 0.10			
7/18/2023	Well 4	Well	Active	18-23-W-7	Wet	5/28/2020	313 10.00	0.2 0.10			
7/18/2023	Well 5	Well	Active	18-23-W-8	Wet	7/23/2019	1,030 10.00	15.2 0.10			
7/18/2023	Well 6	Well	Active	18-23-W-13	Wet	8/08/2019	292 10.00	2.0 0.10			
7/18/2023	Well 7	Well	Active	18-23-W-10	Wet	7/18/2023	236 10.00	< 0.10			
7/18/2023	Well BD-D1	Well	Active	18-23-W-9	Wet	7/18/2023	903 10.00	39.7 0.10			
7/18/2023	Well BD-D2	Well	Active	18-23-W-11	Wet	7/18/2023	903 10.00	39.7 0.10			
	Well BD1	Well	Active			6/06/2018					
7/18/2023	Well D1	Well	Active	18-23-W-12	Wet	7/23/2019	949 10.00	26.4 0.10			
7/18/2023	Well D2	Well	Active	18-23-W-2	Wet	7/23/2019	949 10.00	26.4 0.10			
7/18/2023	Well D3	Well	Active	18-23-W-3	Wet	7/23/2019	769 10.00	14.2 0.10			
7/08/2023	Well F1	Well	Active	18-23-W-1	Wet	7/23/2019	1,140 10.00	18.3 0.10			

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

Notes: Laboratory detection limit listed below each result.

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Water Supply General Minerals Analysis

Required Every Five Years (20% Anually Allowed)

Sample Date	Source ID	Source Type	Sample ID	TDS (mg/l)	CO_3 (mg/l)	HCO_3 (mg/l)	Cl (mg/l)	SO_4-S (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)
7/18/2023	Well 7	Well	18-23-W-10	197.00	14.00	79.10	8.20	8.70	2.50	< 0.00	56.00
				10.00	10.00	5.00	0.10	0.20	0.10	0.10	1.00
7/18/2023	Well BD-D1	Well	18-23-W-9	660.00	< 0.00	177.00	41.40	58.80	116.00	5.60	56.00
				10.00	10.00	5.00	0.10	0.20	0.10	0.10	1.00
7/18/2023	Well BD-D2	Well	18-23-W-11	660.00	< 0.00	177.00	41.40	58.80	116.00	5.60	56.00
				10.00	10.00	5.00	0.10	0.20	0.10	0.10	1.00

Notes: Laboratory detection limit listed below each result.

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

Soil Samples

Soluable Phosphorus (PO_4-P) required once every five years (20% anually allowed)
Remainder of soil analysis is recommended but not required

					Depth 0 to 1 ft					Depth 1 to 2 ft
Sample Date	**Field ID**	**Sample Location**	**Sample ID**	**Last PO_4-P Analysis**	**NO_3-N (mg/kg)**	**PO_4-P (mg/kg)**	**K (AA) (mg/kg)**	**EC (dS/m)**	**%OM**	**NO_3-N (mg/kg)**
5/15/2023	01	N/2	18-23-S-1	5/15/2023	18	40.0	734	0.93		8
5/15/2023	01	S/2	18-23-S-2	5/15/2023	64	64.0	924	1.10		25
5/15/2023	02		18-23-S-3	5/15/2023	83	83.0	975	1.31		47
5/15/2023	03		18-23-S-4	5/15/2023	65	65.0	921	0.97		32
5/15/2023	04		18-23-S-5	5/15/2023	50	50.0	878	1.10		22
5/15/2023	05		18-23-S-6	5/15/2023	72	72.0	1,070	1.01		36
5/15/2023	06	N/2	18-23-S-7	5/15/2023	68	68.0	1,310	1.10		26
5/15/2023	06	S/2	18-23-S-8	5/15/2023	63	63.0	1,140	0.92		25
5/15/2023	07	N/2	18-23-S-9	5/15/2023	76	76.0	1,280	1.99		27
5/15/2023	07	S/2	18-23-S-10	5/15/2023	91	78.0	1,490	2.05		36
5/15/2023	08		18-23-S-11	5/15/2023	95	117.0	1,040	1.60		37
12/12/2023	BR-1		18-23-S-12	12/12/2023		52.0				

Notes: Laboratory detection limit listed below each result.

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
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
05/19/2023	01	Triticale		18-23-P-1	67.13 0.01	1.45 0.100	0.26 0.002	1.75 0.002	9.30 0.01
05/19/2023	01	Triticale		18-23-P-17	67.13 0.01	1.75 0.100	0.26 0.002	1.75 0.002	9.30 0.01
10/11/2023	01	Corn Silage		18-23-P-9	66.91 0.01	1.16 0.100	0.20 0.002	1.37 0.002	6.00 0.01
05/19/2023	02	Triticale		18-23-P-2	61.48 0.01	1.80 0.100	0.27 0.002	1.88 0.002	10.80 0.01
10/11/2023	02	Corn Silage		18-23-P-10	70.93 0.01	1.21 0.100	0.29 0.002	1.45 0.002	6.30 0.01
05/19/2023	03	Triticale		18-23-P-3	66.08 0.01	1.47 0.100	0.26 0.002	1.72 0.002	8.40 0.01
05/19/2023	03	Triticale		18-23-P-18	66.08 0.01	1.75 0.100	0.26 0.002	1.72 0.002	8.40 0.01
10/11/2023	03	Corn Silage		18-23-P-11	67.58 0.01	0.94 0.100	0.29 0.002	1.25 0.002	4.80 0.01
05/19/2023	04	Triticale		18-23-P-4	56.40 0.01	1.62 0.100	0.30 0.002	2.02 0.002	13.90 0.01
05/19/2023	04	Triticale		18-23-P-19	56.40 0.01	1.75 0.100	0.30 0.002	2.02 0.002	13.90 0.01
10/11/2023	04	Corn Silage		18-23-P-12	73.00 0.01	1.24 0.100	0.29 0.002	1.62 0.002	5.70 0.01
05/19/2023	05	Triticale		18-23-P-5	67.77 0.01	1.56 0.100	0.27 0.002	1.89 0.002	14.80 0.01
05/19/2023	05	Triticale		18-23-P-20	67.77 0.01	1.75 0.100	0.27 0.002	1.89 0.002	14.80 0.01
10/11/2023	05	Corn Silage		18-23-P-13	67.40 0.01	1.10 0.100	0.26 0.002	1.55 0.002	3.50 0.01

Notes: Laboratory detection limit listed below each result.

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
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
05/19/2023	06	Triticale		18-23-P-6	70.24 0.01	1.66 0.100	0.32 0.002	2.04 0.002	9.50 0.01
05/19/2023	06	Triticale		18-23-P-21	70.24 0.01	1.75 0.100	0.32 0.002	2.04 0.002	9.50 0.01
10/11/2023	06	Corn Silage		18-23-P-14	70.99 0.01	1.11 0.100	0.19 0.002	1.55 0.002	5.60 0.01
05/19/2023	07	Triticale		18-23-P-7	75.16 0.01	2.16 0.100	0.40 0.002	2.87 0.002	12.00 0.01
10/11/2023	07	Corn Silage		18-23-P-15	66.93 0.01	1.17 0.100	0.17 0.002	1.80 0.002	6.00 0.01
05/19/2023	08	Triticale		18-23-P-8	63.20 0.01	2.15 0.100	0.35 0.002	2.33 0.002	12.20 0.01
10/11/2023	08	Corn Silage		18-23-P-16	64.15 0.01	1.17 0.100	0.16 0.002	1.99 0.002	8.60 0.01

Notes: Laboratory detection limit listed below each result.

Dairy Name: Holstein Farms

Dairy Address: 4625 Ave 176
Tulare, CA 93274

Report Period: Jan 01 through Dec 31, 2023

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_3-N (mg/kg)

Notes: Laboratory detection limit listed below each result.

Manure Tracking Manifest

Operator Information:

Name of Operator: Nick Leyendekker

Name of Dairy Facility: Holstein Dairy

Facility Address: 4639 Ave 176 Tulare CA 93274
Number and Street City Zip Code

Contact Person Name and Phone Number: Nick

Manure Hauler Information:

Name of Hauling Company/Person: Circle T Farms Inc

Address of Hauling Company/Person: 20920 Hwy 43 Corcoran, CA 93212
Number and Street City Zip Code

Contact Person Name and Phone Number: Fred Holt (559) 240-4707

Destination Information:

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

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

Nunes Farm
Name Number and Street City Zip Code Phone Number

Manure Destination Address or Assessor's Parcel Number:

FLD # B-Block + F-18
Number and Street City Zip Code Assessor's Parcel Number

Dates Hauled: 8/9/23 – 8/17/23

Amount Hauled:

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

Manure: 2837.5 Tons or Cubic Yards (indicate which units used)

Manure Solids Content (if amount reported in tons): _____

Manure Density (if amount reported in cubic yards): _____

Method used to determine amount of manure: 227 loads at approximately 12.5 tons

Certification:

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

Operator's Signature: Nick Leyendekker **Date:** 9/27/23

Hauler's Signature: Shondae Holt **Date:** 9/22/23

Manure Tracking Manifest

Operator Information:

Name of Operator: Nick Leyendekker

Name of Dairy Facility: Holstein Dairy

Facility Address: 4639 Ave 176 Tulare 93274
Number and Street City Zip Code

Contact Person Name and Phone Number: Nick Leyendekker 799-7308

Manure Hauler Information:

Name of Hauling Company/Person: Circle T Farms Inc

Address of Hauling Company/Person: 20920 Hwy 43 Corcoran, CA 93212
Number and Street City Zip Code

Contact Person Name and Phone Number: Fred Holt (559) 240-4707

Destination Information:

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

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

Nunes Farm
Name Number and Street City Zip Code Phone Number

Manure Destination Address or Assessor's Parcel Number:

FLD # 3 Big Ranch
Number and Street City Zip Code Assessor's Parcel Number

Dates Hauled: 9/23/23 – 10/4/23

Amount Hauled:

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

Manure: 1800 Tons or Cubic Yards (indicate which units used)

Manure Solids Content (if amount reported in tons): _____

Manure Density (if amount reported in cubic yards): _____

Method used to determine amount of manure: 144 loads at approximately 12.5 tons

Certification:

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

Operator's Signature: Nick Leyendekker **Date:** 10/19/23

Hauler's Signature: Shandee Holt **Date:** 10/16/23

Manure Tracking Manifest

Operator Information:

Name of Operator: Nick Leyendekker

Name of Dairy Facility: Holstien Dairy

Facility Address: 4639 Ave 176 Tulare, CA 93274
Number and Street City Zip Code

Contact Person Name and Phone Number: Nick

Manure Hauler Information:

Name of Hauling Company/Person: Circle T Farms Inc

Address of Hauling Company/Person: 20920 Hwy 43 Corcoran, CA 93212
Number and Street City Zip Code

Contact Person Name and Phone Number: Fred Holt (559) 240-4707

Destination Information:

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

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

Nunes Farms
Name Number and Street City Zip Code Phone Number

Manure Destination Address or Assessor's Parcel Number:

FLD # 12 Big Ranch
Number and Street City Zip Code Assessor's Parcel Number

Dates Hauled: 9/20 - 9/21

Amount Hauled:

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

Manure: 1012.5 Tons or Cubic Yards (indicate which units used)

Manure Solids Content (if amount reported in tons): _____

Manure Density (if amount reported in cubic yards): _____

Method used to determine amount of manure: 81 loads at approximately 12.5 tons

Certification:

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

Operator's Signature: Nick Leyendekker **Date:** 9/27/23

Hauler's Signature: Shondee Holt **Date:** 9/22/23

ATTACHMENT D
ORDER R5-2017-0000

MANURE/ WASTEWATER TRACKING MANIFEST FOR CONFINED BOVINE FEEDING OPERATIONS

Instructions:

1) Complete one manifest for each hauling event, for each destination. A hauling event may last for several days, as long as the manure is being hauled to the same destination.
2) If there are multiple destinations, **complete a separate form for each destination.**
3) The operator must obtain the signature of the hauler upon completion of each manure-hauling event.
4) The operator shall submit copies of manure/ wastewater tracking manifest(s) with the Annual Report for Confined Bovine Feeding Operations.
5) Manifests cannot be used when transferring manure or wastewater to cropland owned or controlled by the owner or operator of the Confined Bovine Feeding Operation as a substitute for preparing and implementing a Nutrient Management Plan for the cropland.
6) Manifests are not needed to document the use of manure for bedding at the operation where the manure was generated.

Operator Information:

Name of Operator: Nick Leyendekker

Name of Facility: Holstein Farms

Facility Address: 4639 Ave 176 Tulare CA. 93274
Number and Street City Zip Code

Contact Person Name and Phone Number: Nick (559) 799-7303
Name Phone Number

Manure/ Wastewater Hauler Information:

Name of Hauling Company/Person: Gutierrez Spreading LLC

Address of Hauling Company /Person: 3612 Ave 236 Tulare CA. 93274
Number and Street City Zip Code

Contact Person: Jesse Gutierrez (559) 280-3719
Name Phone Number

Destination Information:

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

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

Valov Farms and sons 18275 Rd 28 Tulare CA. 93274 (559) 686-6002
Name Number and Street City Zip Code Phone Number

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

field on Ave 184 and Rd. 28 south esta corner Tulare CA.
Number and Street City Zip Code Assessor's Parcel Number

GPS coordinates of the manure/ wastewater destination: _____

Dates Hauled: 10-18-23 / 11-4-23

tons hauled – 4,580 tons of manure

DELLAVALLE™
LABORATORY INC

Holstein Farms
4639 Ave 176
Tulare, CA 93274

Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:56
Reported: 07/26/2023 11:57

Samples in this Report

Lab ID	Sample	Matrix	Sampled By	Crop	Date Sampled
23G1311-01	Well #D2 (Well Head)	Ag Water	Andrew Koetsier		07/17/2023 7:30
23G1311-02	Well #D3 (Pressure Tank)	Ag Water	Andrew Koetsier		07/17/2023 6:43
23G1311-03	Well #D4 (Well Head)	Ag Water	Andrew Koetsier		07/17/2023 7:26
23G1311-04	Well #1 (Standpipe)	Ag Water	Andrew Koetsier		07/17/2023 7:17
23G1311-05	Well #2 (Standpipe)	Ag Water	Andrew Koetsier		07/17/2023 7:08
23G1311-06	Well #3 (Standpipe)	Ag Water	Andrew Koetsier		07/17/2023 6:47
23G1311-07	Well #4 (Standpipe)	Ag Water	Andrew Koetsier		07/17/2023 6:54
23G1311-08	Well #5 (Standpipe)	Ag Water	Andrew Koetsier		07/17/2023 6:59

Default Cooler Temperature on Receipt °C: -1.3
Containers Intact
COC/Labels Agree
Received On Ice

Notes and Definitions

Item	Definition
H	Hold Time Exceeded
MCL	Drinking Water Maximum Contaminant Level
ND	Analyte NOT DETECTED at or above the reporting limit.
NES	Not Enough Sample
*	Not Taken
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

Scott McFriedland

Laboratory Director/Technical Manager

ELAP Certification #1595
A2LA Certification #6440.02

The results in this report apply to the samples as received and were analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. Dellavalle Laboratory, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

DELLAVALLE™
LABORATORY INC

Holstein Farms
4639 Ave 176
Tulare, CA 93274

Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:56
Reported: 07/26/2023 11:57

Sample Results

Sample: Well #D2 (Well Head)
23G1311-01 (Water)

Sampled: 7/17/2023 7:30
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.95**	mmhos/cm	0.01	1		07/25/23 10:37	SM 2510 B		BEG0730
Electrical Conductivity umhos	**949**	umhos/cm	10.0	1		07/25/23 10:37	SM 2510 B		BEG0730
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 07:30	Field		BEG0587
Nitrate Nitrogen as NO3N	**26.4**	mg/L	0.1	1	10	07/18/23 21:58	EPA 300.0		BEG0581
pH	**7.9**	units	1.0	1		07/25/23 10:37	SM 4500-H+	H	BEG0730
Temperature	**25.0**	°C	0.0	1		07/25/23 10:37	SM 2510 B		BEG0730

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LABORATORY INC

Holstein Farms
4639 Ave 176
Tulare, CA 93274

Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:56
Reported: 07/26/2023 11:57

Sample Results
(Continued)

Sample: Well #D3 (Pressure Tank)
23G1311-02 (Water)

Sampled: 7/17/2023 6:43
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.77**	mmhos/cm	0.01	1		07/25/23 10:38	SM 2510 B		BEG0730
Electrical Conductivity umhos	**769**	umhos/cm	10.0	1		07/25/23 10:38	SM 2510 B		BEG0730
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 06:43	Field		BEG0587
Nitrate Nitrogen as NO3N	**14.2**	mg/L	0.1	1	10	07/18/23 22:18	EPA 300.0		BEG0581
pH	**8.1**	units	1.0	1		07/25/23 10:38	SM 4500-H+	H	BEG0730
Temperature	**25.0**	°C	0.0	1		07/25/23 10:38	SM 2510 B		BEG0730

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Account Manager: Andrew Koetsier
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Received: 07/18/2023 7:56
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Sample Results
(Continued)

Sample: Well #D4 (Well Head)
23G1311-03 (Water)

Sampled: 7/17/2023 7:26
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.29**	mmhos/cm	0.01	1		07/25/23 10:39	SM 2510 B		BEG0730
Electrical Conductivity umhos	**292**	umhos/cm	10.0	1		07/25/23 10:39	SM 2510 B		BEG0730
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 07:26	Field		BEG0587
Nitrate Nitrogen as NO3N	**2.0**	mg/L	0.1	1	10	07/18/23 22:38	EPA 300.0		BEG0581
pH	**8.2**	units	1.0	1		07/25/23 10:39	SM 4500-H+	H	BEG0730
Temperature	**25.0**	°C	0.0	1		07/25/23 10:39	SM 2510 B		BEG0730

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Sample Results
(Continued)

Sample: Well #1 (Standpipe)
23G1311-04 (Water)

Sampled: 7/17/2023 7:17
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.25**	mmhos/cm	0.01	1		07/25/23 10:41	SM 2510 B		BEG0730
Electrical Conductivity umhos	**250**	umhos/cm	10.0	1		07/25/23 10:41	SM 2510 B		BEG0730
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 07:17	Field		BEG0587
Nitrate Nitrogen as NO3N	ND	mg/L	0.1	1	10	07/18/23 22:58	EPA 300.0		BEG0581
pH	**9.3**	units	1.0	1		07/25/23 10:41	SM 4500-H+	H	BEG0730
Temperature	**25.0**	°C	0.0	1		07/25/23 10:41	SM 2510 B		BEG0730

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Sample Results
(Continued)

Sample: Well #2 (Standpipe)
23G1311-05 (Water)

Sampled: 7/17/2023 7:08
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.39**	mmhos/cm	0.01	1		07/25/23 10:42	SM 2510 B		BEG0730
Electrical Conductivity umhos	**394**	umhos/cm	10.0	1		07/25/23 10:42	SM 2510 B		BEG0730
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 07:08	Field		BEG0587
Nitrate Nitrogen as NO3N	**2.2**	mg/L	0.1	1	10	07/18/23 23:18	EPA 300.0		BEG0581
pH	**8.2**	units	1.0	1		07/25/23 10:42	SM 4500-H+	H	BEG0730
Temperature	**25.0**	°C	0.0	1		07/25/23 10:42	SM 2510 B		BEG0730

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Sample Results
(Continued)

Sample: Well #3 (Standpipe)
23G1311-06 (Water)

Sampled: 7/17/2023 6:47
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.26**	mmhos/cm	0.01	1		07/25/23 10:43	SM 2510 B		BEG0730
Electrical Conductivity umhos	**265**	umhos/cm	10.0	1		07/25/23 10:43	SM 2510 B		BEG0730
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 06:47	Field		BEG0587
Nitrate Nitrogen as NO3N	ND	mg/L	0.1	1	10	07/18/23 23:37	EPA 300.0		BEG0581
pH	**9.4**	units	1.0	1		07/25/23 10:43	SM 4500-H+	H	BEG0730
Temperature	**25.0**	°C	0.0	1		07/25/23 10:43	SM 2510 B		BEG0730

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Sample Results
(Continued)

Sample: Well #4 (Standpipe)
23G1311-07 (Water)

Sampled: 7/17/2023 6:54
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.31**	mmhos/cm	0.01	1		07/25/23 10:58	SM 2510 B		BEG0731
Electrical Conductivity umhos	**313**	umhos/cm	10.0	1		07/25/23 10:58	SM 2510 B		BEG0731
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 06:54	Field		BEG0587
Nitrate Nitrogen as NO3N	**0.2**	mg/L	0.1	1	10	07/18/23 23:57	EPA 300.0		BEG0581
pH	**8.6**	units	1.0	1		07/25/23 10:58	SM 4500-H+	H	BEG0731
Temperature	**25.0**	°C	0.0	1		07/25/23 10:58	SM 2510 B		BEG0731

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Sample Results
(Continued)

Sample: Well #5 (Standpipe)
23G1311-08 (Water)

Sampled: 7/17/2023 6:59
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**1.03**	mmhos/cm	0.01	1		07/25/23 10:59	SM 2510 B		BEG0731
Electrical Conductivity umhos	**1030**	umhos/cm	10.0	1		07/25/23 10:59	SM 2510 B		BEG0731
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 06:59	Field		BEG0587
Nitrate Nitrogen as NO3N	**15.2**	mg/L	0.1	1	10	07/19/23 00:17	EPA 300.0		BEG0581
pH	**7.8**	units	1.0	1		07/25/23 10:59	SM 4500-H+	H	BEG0731
Temperature	**25.0**	°C	0.0	1		07/25/23 10:59	SM 2510 B		BEG0731

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Quality Control

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0581										
Blank (BEG0581-BLK1)					Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Blank (BEG0581-BLK2)					Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Blank (BEG0581-BLK3)					Prepared & Analyzed: 7/19/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
LCS (BEG0581-BS1)					Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	5.0		0.1	mg/L	5.000		100	90-110		
LCS (BEG0581-BS2)					Prepared & Analyzed: 7/19/2023					
Nitrate Nitrogen as NO3N	5.1		0.1	mg/L	5.000		101	90-110		
Duplicate (BEG0581-DUP1)		**Source: 23G1236-01**			Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	0.2		0.1	mg/L		0.2			0.00	10
Duplicate (BEG0581-DUP2)		**Source: 23G1309-02**			Prepared & Analyzed: 7/19/2023					
Nitrate Nitrogen as NO3N	0.03		0.1	mg/L		0.03			0.00	10
Matrix Spike (BEG0581-MS1)		**Source: 23G1236-01**			Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	5.1		0.1	mg/L	5.000	0.2	98.6	90-110		
Matrix Spike (BEG0581-MS2)		**Source: 23G1309-02**			Prepared & Analyzed: 7/19/2023					
Nitrate Nitrogen as NO3N	5.1		0.1	mg/L	5.000	0.03	102	90-110		
Reference (BEG0581-SRM1)					Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	10.2			mg/L	10.00		102	90-110		
Reference (BEG0581-SRM2)					Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	10.2			mg/L	10.00		102	90-110		
Reference (BEG0581-SRM3)					Prepared & Analyzed: 7/19/2023					
Nitrate Nitrogen as NO3N	10.2			mg/L	10.00		102	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0730										
Blank (BEG0730-BLK1)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	ND		0.01	mmhos/cm						
pH	5.6		1.0	units						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Temperature	25.0		0.0	°C						
Blank (BEG0730-BLK2)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	5.8		1.0	units						
Electrical Conductivity	ND		0.01	mmhos/cm						
Temperature	25.0		0.0	°C						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Blank (BEG0730-BLK3)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	6.0		1.0	units						
Electrical Conductivity	ND		0.01	mmhos/cm						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Temperature	25.0		0.0	°C						
Duplicate (BEG0730-DUP1)		**Source: 23G1303-09**			Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1.40		0.01	mmhos/cm		1.41			0.604	10
pH	7.6		1.0	units		7.6			0.264	10
Electrical Conductivity umhos	1400		10.0	umhos/cm		1410			0.604	10
Duplicate (BEG0730-DUP2)		**Source: 23G1311-06**			Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	9.4		1.0	units		9.4			0.107	10
Electrical Conductivity	0.27		0.01	mmhos/cm		0.26			0.452	10
Electrical Conductivity umhos	266		10.0	umhos/cm		265			0.452	10
Reference (BEG0730-SRM1)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	547			umhos/cm	538.0		102	90-110		
Reference (BEG0730-SRM2)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	7.8			units	7.790		101	.7163-101.28		
Reference (BEG0730-SRM3)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1020			umhos/cm	1000		102	90-110		
Electrical Conductivity umhos	1020			umhos/cm	1000		102	90-110		
Reference (BEG0730-SRM4)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1050			umhos/cm	1000		105	90-110		
Electrical Conductivity umhos	1050			umhos/cm	1000		105	90-110		
Reference (BEG0730-SRM5)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1060			umhos/cm	1000		106	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0730 (Continued)										
Reference (BEG0730-SRM5)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity umhos	1060			umhos/cm	1000		106	90-110		
Reference (BEG0730-SRM6)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	4.0			units	4.000		100	97.5-102.5		
Reference (BEG0730-SRM7)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	4.0			units	4.000		100	97.5-102.5		
Reference (BEG0730-SRM8)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	4.0			units	4.000		100	97.5-102.5		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0731										
Blank (BEG0731-BLK1)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	5.4		1.0	units						
Electrical Conductivity	ND		0.01	mmhos/cm						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Temperature	25.0		0.0	°C						
Blank (BEG0731-BLK2)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	5.6		1.0	units						
Electrical Conductivity	ND		0.01	mmhos/cm						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Temperature	25.0		0.0	°C						
Blank (BEG0731-BLK3)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	ND		0.01	mmhos/cm						
pH	5.6		1.0	units						
Temperature	25.0		0.0	°C						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Duplicate (BEG0731-DUP1)		**Source: 23G1320-01**			Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	7.0		1.0	units		7.0			0.286	10
Electrical Conductivity	0.03		0.01	mmhos/cm		0.03			0.306	10
Electrical Conductivity umhos	32.6		10.0	umhos/cm		32.7			0.306	10
Duplicate (BEG0731-DUP2)		**Source: 23G1331-01**			Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	7.0		1.0	units		7.0			0.142	10
Electrical Conductivity	0.03		0.01	mmhos/cm		0.03			0.310	10
Electrical Conductivity umhos	32.2		10.0	umhos/cm		32.3			0.310	10
Reference (BEG0731-SRM1)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	562			umhos/cm	538.0		104	90-110		
Reference (BEG0731-SRM2)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	7.8			units	7.790		101	.7163-101.28		
Reference (BEG0731-SRM3)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1040			umhos/cm	1000		104	90-110		
Electrical Conductivity umhos	1040			umhos/cm	1000		104	90-110		
Reference (BEG0731-SRM4)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1050			umhos/cm	1000		105	90-110		
Electrical Conductivity umhos	1050			umhos/cm	1000		105	90-110		
Reference (BEG0731-SRM5)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1030			umhos/cm	1000		103	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0731 (Continued)										
Reference (BEG0731-SRM5)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity umhos	1030			umhos/cm	1000		103	90-110		
Reference (BEG0731-SRM6)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	4.0			units	4.000		101	97.5-102.5		
Reference (BEG0731-SRM7)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	4.0			units	4.000		101	97.5-102.5		
Reference (BEG0731-SRM8)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	4.0			units	4.000		100	97.5-102.5		

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07/18/23 07:56 23G1311

WATER WORK REQUEST

Bill To: Acct No. 13898 Cons. 23

Purchase Order No. Results Needed By

Client: Holstein Farms
Address: 4639 Ave 176
City, State, Zip: Tulare, CA 93274
Email: cherylleyendekker@gmail.com

Copy to: jvanderschuur@ppeng.com, sbommelje@ppeng.com, Mark.Rip@nutrien.com

Requested by/Cell: Mark 804-6242

Facility: 4639 Ave 176, Tulare

Date sampled: 07-17-2023

Sampled by: Andrew Koekier

☑ QA/QC Document ☑ Copy of Chain ☐ RWQCB

DELLAVALLE LABORATORY, INC.

1910 W. McKinley Avenue, Suite 110 • Fresno, CA 93728
www.dellavallelab.com 559 233-6129 • 800 228-9896 • Fax 559 268-8174

No. of Samples 8 No. Bottles 8

Water Type: ☑ Ag Water ☐ Supply Water ☐ Drinking ☐ Ground Water ☐ Other ☐ Wastewater ☐ Mon. Well

Analysis and Bottles Required: *(Please Indicate Analysis)*

☑ **DWW1: (EC, pH, NO_3-N, NH_4-N Field Test)**
(1) l L plastic, unpreserved (white)

☐ DWW2: (DWW1 Plus SO_4, CO_3, HCO_3, Cl, Ca, Mg, Na, TDS)
(1) l L plastic, unpreserved (white)

☐ DCW1: (EC, NO_3-N, TDS)
(1) l L plastic, unpreserved (white)

☐ DPW1: (EC, pH, NO_3-N, NH_4-N, TKN, TDS, TP, TK)
(1) l L plastic, unpreserved (white)

☐ DPW2: (DPW1 Plus Ca, Mg, Na, HCO_3, CO_3, SO_4, Cl)
(1) l L plastic, unpreserved (white)

☐ Other

DESCRIPTION OF SAMPLES

			Date Sampled	Time Sampled	Field NH4-N (mg/L)	Received Temp °C
1.	~~Well #D1~~ AK	Sampled From: Well Head	07-17-23			
2.	Well #D2	Sampled From: Well Head		7:30am	0	-1.3
3.	Well #D3	Sampled From: Pressure Tank		6:43am	0	-1.6
4.	Well #D4	Sampled From: Well Head		7:26am	0	-1.0
5.	Well #1	Sampled From: Standpipe		7:17am	0	
6.	Well #2	Sampled From: Standpipe		7:08am	0	-1.2
7.	Well #3	Sampled From: Standpipe		6:47am	0	-0.6
8.	Well #4	Sampled From: Standpipe		6:54am	0	-1.4
9.	Well #5	Sampled From: Standpipe		6:59am	0	-1.3
10.	~~Well #6~~ AK	Sampled From:				

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	AK	DLI	07-17-2023 / 6:43am	
Second	MM	DLI	7/18 7:56	
Third				
Fourth				

0
6

I guarantee that as the client, or on behalf of the client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorneys' fees. It is understood that payment is expected to be cash with samples unless terms have been previously arranged. Terms are net 30 days; overdue accounts will be charged a dated damage fee of 2% per month (annually 24 %) or $5.00 per month whichever is greater.

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

Invoicing Information:
Contract 2023
Sampling Hrs ____ Miles ____ Consulting ____
Amt Paid ____ Rec By ____ Check No. ____

Shipping
$ ____ In
$ ____ Out
Date ____

Signature ____

Sample received in cooler with ice?
| | Yes | | No

ctt:update 2020

IR Thermometer SN: 200560723
Correction Factor: 0°C
Calibration Due: 9/26/2023
Location: Laboratory

07/18/23 07:56 23G1311

Shipping Information: Shipped In ☐ Picked-Up ☐ Walk In ☐ DLI Sampler ☑ Other ☐ _____

☐ Samples refrigerated before pick up | ☐ Picked up samples placed in Ice chest

Container: Ice Chest ☑ Box ☐ None ☐ | **Refrigerant:** Wet Ice ☑ Blue Ice ☐ None ☐

Samples Preserved with HNO_3 or H_2SO_4 were: ☐ Received Preserved ☐ Preserved Upon Receipt at Laboratory

Type of Container(s) Received		Sample Number 1	2	3	4	5	6	7	8	9	10
Sample Containers for Internal (DLI) Use *(Containers that go into the Lab)*											
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
	250 mL unpreserved (White) Plastic	✓	✓	✓	✓	✓	✓	✓	✓		
	250 mL HNO_3 (Red) Plastic										
	* pH Value										
	250 mL H_2SO_4 (Yellow) Plastic										
	* pH Value										
	500 mL unpreserved (White) Plastic										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
Special	500mL unpreserved (White) Glass										
	PO4-P Kit										
	Other:										
Sample Containers for Subcontracted ("Send Out") Analyses *(Containers that go in the Subcontract ("Send Out") Refrigerator)*											
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
	250 mL unpreserved (White) Plastic										
	250 mL HNO_3 (Red) Plastic										
	250 mL H_2SO_4 (Yellow) Plastic										
	500 mL HNO_3 (Red)										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
	1 L HNO_3 (Red)										
VOA Vials	40 mL VOA, $Na_2S_2O_3$ + MCAA (EPA531)										
	40 mL VOA, $Na_2S_2O_3$ (EPA547)										
	40mL AG VOA unpreserved (White) (Set of 3)										
	40 mL AG VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
	40mL VOA, H_3PO_4 (Set of 3)										
	40 mL VOA, HCl (Blue) (Set of 3)										
	40 mL VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
Glass	250 mL AG unpreserved (White)										
	250 mL AG H_2SO_4 (Yellow)										
	250 mL AG $Na_2S_2O_3$ (Green)										
	250 mL AG $Na_2S_2O_3$ + MCAA										
	500 mL glass unpreserved (White)										
	500 mL AG HCl (Blue)										
	1 L AG unpreserved (White)										
	1 L AG H_2SO_4 (Yellow)										
	1 L AG $Na_2S_2O_3$ (Green)										
	1 L AG HCl (Blue)										
Special	Cr^{6+} - 50mL Plastic w/Borate/HCO_3/CO_3										
	Cyanide - 500 mL NaOH										
	Asbestos - 1L P wrapped in foil (Set of 2)										
	Sulfide - 1 L **AG** or **P** NaOH + ZnAc										
	Chlorite/Bromate - 250 mL AG with EDA										
	HAA5 - 250mL AG Ammonium Chlorite										
	DO KIT										
	Other:										

DELLAVALLE™
LABORATORY INC

Holstein Farms
4639 Ave 176
Tulare, CA 93274

Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:53
Reported: 07/26/2023 12:05

Samples in this Report

Lab ID	Sample	Matrix	Sampled By	Crop	Date Sampled
23G1306-01	Well #F1 (Standpipe)	Ag Water	Andrew Koetsier		07/17/2023 6:25

Default Cooler Temperature on Receipt °C: -1.1
Containers Intact
COC/Labels Agree
Received On Ice

Notes and Definitions

Item	Definition
H	Hold Time Exceeded
MCL	Drinking Water Maximum Contaminant Level
ND	Analyte NOT DETECTED at or above the reporting limit.
NES	Not Enough Sample
*	Not Taken
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

Scott McFriedland

Laboratory Director/Technical Manager

ELAP Certification #1595
A2LA Certification #6440.02

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LABORATORY INC

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Account# 00-0013898
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Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:53
Reported: 07/26/2023 12:05

Sample Results

Sample: Well #F1 (Standpipe)
23G1306-01 (Water)

Sampled: 7/17/2023 6:25
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**1.14**	mmhos/cm	0.01	1		07/25/23 10:32	SM 2510 B		BEG0730
Electrical Conductivity umhos	**1140**	umhos/cm	10.0	1		07/25/23 10:32	SM 2510 B		BEG0730
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 06:25	Field		BEG0585
Nitrate Nitrogen as NO3N	**18.3**	mg/L	0.1	1	10	07/18/23 23:33	EPA 300.0		BEG0582
pH	**7.7**	units	1.0	1		07/25/23 10:32	SM 4500-H+	H	BEG0730
Temperature	**25.0**	°C	0.0	1		07/25/23 10:32	SM 2510 B		BEG0730

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LABORATORY INC

Holstein Farms
4639 Ave 176
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Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:53
Reported: 07/26/2023 12:05

Quality Control

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0582										
Blank (BEG0582-BLK1)					Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Blank (BEG0582-BLK2)					Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Blank (BEG0582-BLK3)					Prepared: 7/18/2023 Analyzed: 7/19/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
LCS (BEG0582-BS1)					Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	4.9		0.1	mg/L	5.000		98.2	90-110		
LCS (BEG0582-BS2)					Prepared: 7/18/2023 Analyzed: 7/19/2023					
Nitrate Nitrogen as NO3N	5.0		0.1	mg/L	5.000		100	90-110		
Duplicate (BEG0582-DUP1)		**Source: 23G0205-01**			Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	1.0		0.1	mg/L		1.0			2.32	10
Duplicate (BEG0582-DUP2)		**Source: 23G1242-05**			Prepared: 7/18/2023 Analyzed: 7/19/2023					
Nitrate Nitrogen as NO3N	8.5		0.1	mg/L		8.5			0.177	10
Matrix Spike (BEG0582-MS1)		**Source: 23G0205-01**			Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	6.0		0.1	mg/L	5.000	1.0	99.1	90-110		
Matrix Spike (BEG0582-MS2)		**Source: 23G1242-05**			Prepared: 7/18/2023 Analyzed: 7/19/2023					
Nitrate Nitrogen as NO3N	13.3		0.1	mg/L	5.000	8.5	96.5	90-110		
Reference (BEG0582-SRM1)					Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	10.1			mg/L	10.00		101	90-110		
Reference (BEG0582-SRM2)					Prepared & Analyzed: 7/18/2023					
Nitrate Nitrogen as NO3N	9.9			mg/L	10.00		99.0	90-110		
Reference (BEG0582-SRM3)					Prepared: 7/18/2023 Analyzed: 7/19/2023					
Nitrate Nitrogen as NO3N	9.9			mg/L	10.00		99.0	90-110		

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DELLAVALLE™ LABORATORY INC

Holstein Farms
4639 Ave 176
Tulare, CA 93274

Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:53
Reported: 07/26/2023 12:05

Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0730										
Blank (BEG0730-BLK1)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	ND		0.01	mmhos/cm						
pH	5.6		1.0	units						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Temperature	25.0		0.0	°C						
Blank (BEG0730-BLK2)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	ND		0.01	mmhos/cm						
pH	5.8		1.0	units						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Temperature	25.0		0.0	°C						
Blank (BEG0730-BLK3)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	ND		0.01	mmhos/cm						
pH	6.0		1.0	units						
Temperature	25.0		0.0	°C						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Duplicate (BEG0730-DUP1)		**Source: 23G1303-09**			Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1.40		0.01	mmhos/cm		1.41			0.604	10
pH	7.6		1.0	units		7.6			0.264	10
Electrical Conductivity umhos	1400		10.0	umhos/cm		1410			0.604	10
Duplicate (BEG0730-DUP2)		**Source: 23G1311-06**			Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	0.27		0.01	mmhos/cm		0.26			0.452	10
pH	9.4		1.0	units		9.4			0.107	10
Electrical Conductivity umhos	266		10.0	umhos/cm		265			0.452	10
Reference (BEG0730-SRM1)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	547			umhos/cm	538.0		102	90-110		
Reference (BEG0730-SRM2)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	7.8			units	7.790		101	.7163-101.28		
Reference (BEG0730-SRM3)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1020			umhos/cm	1000		102	90-110		
Electrical Conductivity umhos	1020			umhos/cm	1000		102	90-110		
Reference (BEG0730-SRM4)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1050			umhos/cm	1000		105	90-110		
Electrical Conductivity umhos	1050			umhos/cm	1000		105	90-110		
Reference (BEG0730-SRM5)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity	1060			umhos/cm	1000		106	90-110		

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4639 Ave 176
Tulare, CA 93274

Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:53
Reported: 07/26/2023 12:05

Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0730 (Continued)										
Reference (BEG0730-SRM5)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
Electrical Conductivity umhos	1060			umhos/cm	1000		106	90-110		
Reference (BEG0730-SRM6)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	4.0			units	4.000		100	97.5-102.5		
Reference (BEG0730-SRM7)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	4.0			units	4.000		100	97.5-102.5		
Reference (BEG0730-SRM8)					Prepared: 7/20/2023	Analyzed: 7/25/2023				
pH	4.0			units	4.000		100	97.5-102.5		

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07/18/23 07:53 23G1306

EDS

DELLAVALLE LABORATORY, INC.

1910 W. McKinley Avenue, Suite 110 • Fresno, CA 93728
www.dellavallelab.com 559 233-6129 • 800 228-9896 • Fax 559 268-8174

WATER WORK REQUEST

Bill To: Acct No. 13898 Cons. 23

Purchase Order No. Results Needed By

Client: **Holstein Farms**
Address: 4639 Ave 176
City, State, Zip: Tulare, CA 93274
Email: cherylleyendekker@gmail.com

Copy to: jvanderschuur@ppeng.com, sbommelje@ppeng.com, Mark.Rip@nutrien.com

Requested by/Cell: Mark 804-6242

Facility: 4639 Ave 176, Tulare

Date sampled: 07-17-2023

Sampled by: Andrew Kadir

☑ QA/QC Document ☑ Copy of Chain ☐ RWQCB

No. of Samples: 1 No. Bottles: 1

Water Type:
☑ Ag Water ☐ Drinking ☐ Wastewater
☐ Supply Water ☐ Ground Water ☐ Mon. Well
☐ Other

Analysis and Bottles Required: *(Please Indicate Analysis)*

☑ **DWW1: (EC, pH, NO_3-N, NH_4-N Field Test)**
(1) 1 L plastic, unpreserved (white)

☐ DWW2: (DWW1 Plus SO_4, CO_3, HCO_3, Cl, Ca, Mg, Na, TDS)
(1) 1 L plastic, unpreserved (white)

☐ DCW1: (EC, NO_3-N, TDS)
(1) 1 L plastic, unpreserved (white)

☐ DPW1: (EC, pH, NO_3-N, NH_4-N, TKN, TDS, TP, TK)
(1) 1 L plastic, unpreserved (white)

☐ DPW2: (DPW1 Plus Ca, Mg, Na, HCO_3, CO_3, SO_4, Cl)
(1) 1 L plastic, unpreserved (white)

☐ Other

DESCRIPTION OF SAMPLES

			Date Sampled	Time Sampled	Field NH4-N (mg/L)	Received Temp °C
1.	Well #F1	Sampled From: Standpipe	07-17-23	6:25am	0	-1.1
2.		Sampled From:				
3.		Sampled From:				
4.		Sampled From:				
5.		Sampled From:				
6.		Sampled From:				
7.		Sampled From:				
8.		Sampled From:				
9.		Sampled From:				
10.		Sampled From:				

IR Thermometer SN: 200560723
Correction Factor: 0°C
Calibration Due: 9/26/2023
Location: Laboratory

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	AK	DLI	07-17-2023/6:25am	
Second	MM	DLI	7/18 7:53	
Third				
Fourth				

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

Invoicing Information:
Contract 2023
Sampling Hrs ____ Miles ____ Consulting ____
Amt Paid ____ Rec By ____ Check No. ____ Date ____

Shipping
$ ____ In
$ ____ Out

Signature ____

Sample received in cooler with ice?
[ ] Yes [ ] No

ctl:update 2020

07/18/23 07:53 23G1306

Shipping Information: Shipped In ☐ Picked-Up ☐ Walk In ☐ DLI Sampler ☑ Other ☐ _____

☐ Samples refrigerated before pick up | ☐ Picked up samples placed in Ice chest

Container: Ice Chest ☑ Box ☐ None ☐ | **Refrigerant:** Wet Ice ☑ Blue Ice ☐ None ☐

Samples Preserved with HNO_3 or H_2SO_4 were: ☐ Received Preserved ☐ Preserved Upon Receipt at Laboratory

	Type of Container(s) Received	Sample Number 1	2	3	4	5	6	7	8	9	10
	Sample Containers for Internal (DLI) Use *(Containers that go into the Lab)*										
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
	250 mL unpreserved (White) Plastic										
	250 mL HNO_3 (Red) Plastic										
	* pH Value										
	250 mL H_2SO_4 (Yellow) Plastic										
	* pH Value										
	500 mL unpreserved (White) Plastic										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
Special	500mL unpreserved (White) Glass										
	PO4-P Kit										
	Other:										
	Sample Containers for Subcontracted ("Send Out") Analyses *(Containers that go in the Subcontract ("Send Out") Refrigerator)*										
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
	250 mL unpreserved (White) Plastic										
	250 mL HNO_3 (Red) Plastic										
	250 mL H_2SO_4 (Yellow) Plastic										
	500 mL HNO_3 (Red)										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
	1 L HNO_3 (Red)										
VOA Vials	40 mL VOA, $Na_2S_2O_3$ + MCAA (EPA531)										
	40 mL VOA, $Na_2S_2O_3$ (EPA547)										
	40mL AG VOA unpreserved (White) (Set of 3)										
	40 mL AG VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
	40mL VOA, H_3PO_4 (Set of 3)										
	40 mL VOA, HCl (Blue) (Set of 3)										
	40 mL VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
Glass	250 mL AG unpreserved (White)										
	250 mL AG H_2SO_4 (Yellow)										
	250 mL AG $Na_2S_2O_3$ (Green)										
	250 mL AG $Na_2S_2O_3$ + MCAA										
	500 mL glass unpreserved (White)										
	500 mL AG HCl (Blue)										
	1 L AG unpreserved (White)										
	1 L AG H_2SO_4 (Yellow)										
	1 L AG $Na_2S_2O_3$ (Green)										
	1 L AG HCl (Blue)										
Special	Cr^{6+} - 50mL Plastic w/Borate/HCO_3/CO_3										
	Cyanide - 500 mL NaOH										
	Asbestos - 1L P wrapped in foil (Set of 2)										
	Sulfide - 1 L **AG** or **P** NaOH + ZnAc										
	Chlorite/Bromate - 250 mL AG with EDA										
	HAA5 - 250mL AG Ammonium Chlorite										
	DO KIT										
	Other:										

DELLAVALLE™
LABORATORY INC

Holstein Farms
4639 Ave 176
Tulare, CA 93274

Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:55
Reported: 07/27/2023 10:53

Samples in this Report

Lab ID	Sample	Matrix	Sampled By	Crop	Date Sampled
23G1309-01	BD Dom (Pressure Tank)	Ag Water	Andrew Koetsier		07/17/2023 6:30
23G1309-02	Well #7 (Standpipe)	Ag Water	Andrew Koetsier		07/17/2023 7:02

Default Cooler Temperature on Receipt °C: -0.9
Containers Intact
COC/Labels Agree
Received On Ice

Notes and Definitions

Item	Definition
H	Hold Time Exceeded
MCL	Drinking Water Maximum Contaminant Level
ND	Analyte NOT DETECTED at or above the reporting limit.
NES	Not Enough Sample
*	Not Taken
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

Scott McFriedland

Laboratory Director/Technical Manager

ELAP Certification #1595
A2LA Certification #6440.02

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Sample Results

Sample: BD Dom (Pressure Tank)
23G1309-01 (Water)

Sampled: 7/17/2023 6:30
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Alkalinity as CaCO3	**177**	mg/L	10.0	1		07/21/23 17:24	SM 2320 B		BEG0723
Calcium	**116**	mg/L	0.1	1		07/26/23 11:49	EPA 200.7		BEG0735
Chloride	**41.4**	mg/L	0.2	1	250	07/18/23 21:19	EPA 300.0		BEG0581
Carbonate as CaCO3	ND	mg/L	1	1		07/21/23 17:24	SM 2320 B		BEG0723
Electrical Conductivity	**0.90**	mmhos/cm	0.01	1		07/21/23 17:24	SM 2510 B		BEG0723
Electrical Conductivity umhos	**903**	umhos/cm	10.0	1		07/21/23 17:24	SM 2510 B		BEG0723
Bicarbonate as CaCO3	**177**	mg/L	5.00	1		07/21/23 17:24	SM 2320 B		BEG0723
Potassium	ND	mg/L	0.500	1		07/26/23 11:49	EPA 200.7		BEG0735
Magnesium	**5.6**	mg/L	0.1	1		07/26/23 11:49	EPA 200.7		BEG0735
Sodium	**56**	mg/L	1	1		07/26/23 11:49	EPA 200.7		BEG0735
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 06:30	Field		BEG1057
Nitrate Nitrogen as NO3N	**39.7**	mg/L	0.1	1	10	07/18/23 21:19	EPA 300.0		BEG0581
Hydroxide as CaCO3	ND	mg/L	1.00	1		07/21/23 17:24	SM 2320 B		BEG0723
pH	**7.8**	units	1.0	1		07/21/23 17:24	SM 4500-H+	H	BEG0723
Sulfate (SO4)	**58.8**	mg/L	0.5	1	250	07/18/23 21:19	EPA 300.0		BEG0581
Total Filterable Solids (TDS)	**660**	mg/L	10.0	1		07/21/23 16:55	SM 2540 C		BEG0573

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Sample Results
(Continued)

Sample: Well #7 (Standpipe)
23G1309-02 (Water)

Sampled: 7/17/2023 7:02
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Alkalinity as CaCO3	**93.5**	mg/L	10.0	1		07/21/23 17:29	SM 2320 B		BEG0723
Calcium	**2.5**	mg/L	0.1	1		07/26/23 11:50	EPA 200.7		BEG0735
Chloride	**8.2**	mg/L	0.2	1	250	07/18/23 21:38	EPA 300.0		BEG0581
Carbonate as CaCO3	**14**	mg/L	1	1		07/21/23 17:29	SM 2320 B		BEG0723
Electrical Conductivity	**0.24**	mmhos/cm	0.01	1		07/21/23 17:29	SM 2510 B		BEG0723
Electrical Conductivity umhos	**236**	umhos/cm	10.0	1		07/21/23 17:29	SM 2510 B		BEG0723
Bicarbonate as CaCO3	**79.1**	mg/L	5.00	1		07/21/23 17:29	SM 2320 B		BEG0723
Potassium	ND	mg/L	0.500	1		07/26/23 11:50	EPA 200.7		BEG0735
Magnesium	ND	mg/L	0.1	1		07/26/23 11:50	EPA 200.7		BEG0735
Sodium	**56**	mg/L	1	1		07/26/23 11:50	EPA 200.7		BEG0735
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 07:02	Field		BEG1057
Nitrate Nitrogen as NO3N	ND	mg/L	0.1	1	10	07/18/23 21:38	EPA 300.0		BEG0581
Hydroxide as CaCO3	ND	mg/L	1.00	1		07/21/23 17:29	SM 2320 B		BEG0723
pH	**9.2**	units	1.0	1		07/21/23 17:29	SM 4500-H+	H	BEG0723
Sulfate (SO4)	**8.7**	mg/L	0.5	1	250	07/18/23 21:38	EPA 300.0		BEG0581
Total Filterable Solids (TDS)	**197**	mg/L	10.0	1		07/21/23 16:55	SM 2540 C		BEG0573

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Quality Control

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0573										
Blank (BEG0573-BLK1)					Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	ND		10.0	mg/L						
LCS (BEG0573-BS1)					Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	28.8		10.0	mg/L	2000		1.44	0-200		
Duplicate (BEG0573-DUP1)		**Source: 23G0065-01**			Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	775		10.0	mg/L		770			0.647	10
Duplicate (BEG0573-DUP2)		**Source: 23G1308-01**			Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	1420		10.0	mg/L		1400			1.77	10
Reference (BEG0573-SRM1)					Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	330			mg/L	325.0		102	90-110		
Reference (BEG0573-SRM2)					Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	500			mg/L	495.0		101	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0581										
Blank (BEG0581-BLK1)					Prepared & Analyzed: 7/18/2023					
Chloride	ND		0.2	mg/L						
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Sulfate (SO4)	ND		0.5	mg/L						
Blank (BEG0581-BLK2)					Prepared & Analyzed: 7/18/2023					
Chloride	ND		0.2	mg/L						
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Sulfate (SO4)	ND		0.5	mg/L						
Blank (BEG0581-BLK3)					Prepared & Analyzed: 7/19/2023					
Chloride	ND		0.2	mg/L						
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Sulfate (SO4)	ND		0.5	mg/L						
LCS (BEG0581-BS1)					Prepared & Analyzed: 7/18/2023					
Chloride	4.8		0.2	mg/L	5.000		96.7	90-110		
Nitrate Nitrogen as NO3N	5.0		0.1	mg/L	5.000		100	90-110		
Sulfate (SO4)	4.6		0.5	mg/L	5.000		92.8	90-110		
LCS (BEG0581-BS2)					Prepared & Analyzed: 7/19/2023					
Chloride	4.9		0.2	mg/L	5.000		98.2	90-110		
Nitrate Nitrogen as NO3N	5.1		0.1	mg/L	5.000		101	90-110		
Sulfate (SO4)	4.6		0.5	mg/L	5.000		92.0	90-110		
Duplicate (BEG0581-DUP1)		**Source: 23G1236-01**			Prepared & Analyzed: 7/18/2023					
Chloride	6.9		0.2	mg/L		6.9			0.377	10
Nitrate Nitrogen as NO3N	0.2		0.1	mg/L		0.2			0.00	10
Sulfate (SO4)	25.8		0.5	mg/L		25.9			0.201	10
Duplicate (BEG0581-DUP2)		**Source: 23G1309-02**			Prepared & Analyzed: 7/19/2023					
Chloride	8.2		0.2	mg/L		8.2			0.109	10
Nitrate Nitrogen as NO3N	0.03		0.1	mg/L		0.03			0.00	10
Sulfate (SO4)	8.7		0.5	mg/L		8.7			0.449	10
Matrix Spike (BEG0581-MS1)		**Source: 23G1236-01**			Prepared & Analyzed: 7/18/2023					
Chloride	12.0		0.2	mg/L	5.000	6.9	102	90-110		
Nitrate Nitrogen as NO3N	5.1		0.1	mg/L	5.000	0.2	98.6	90-110		
Sulfate (SO4)	31.2		0.5	mg/L	5.000	25.9	106	90-110		
Matrix Spike (BEG0581-MS2)		**Source: 23G1309-02**			Prepared & Analyzed: 7/19/2023					
Chloride	13.2		0.2	mg/L	5.000	8.2	98.4	90-110		
Nitrate Nitrogen as NO3N	5.1		0.1	mg/L	5.000	0.03	102	90-110		
Sulfate (SO4)	13.8		0.5	mg/L	5.000	8.7	102	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0581 (Continued)										
Reference (BEG0581-SRM1)					Prepared & Analyzed: 7/18/2023					
Chloride	12.8			mg/L	12.50		102	90-110		
Nitrate Nitrogen as NO3N	10.2			mg/L	10.00		102	90-110		
Sulfate (SO4)	10.0			mg/L	10.00		100	90-110		
Reference (BEG0581-SRM2)					Prepared & Analyzed: 7/18/2023					
Chloride	12.7			mg/L	12.50		102	90-110		
Nitrate Nitrogen as NO3N	10.2			mg/L	10.00		102	90-110		
Sulfate (SO4)	9.9			mg/L	10.00		99.3	90-110		
Reference (BEG0581-SRM3)					Prepared & Analyzed: 7/19/2023					
Chloride	12.7			mg/L	12.50		102	90-110		
Nitrate Nitrogen as NO3N	10.2			mg/L	10.00		102	90-110		
Sulfate (SO4)	10.0			mg/L	10.00		99.5	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0723										
Blank (BEG0723-BLK1)					Prepared: 7/20/2023 Analyzed: 7/21/2023					
Alkalinity as CaCO3	ND		10.0	mg/L						
Carbonate as CaCO3	ND		1	mg/L						
pH	5.4		1.0	units						
Hydroxide as CaCO3	ND		1.00	mg/L						
Electrical Conductivity	ND		0.01	mmhos/cm						
Bicarbonate as CaCO3	ND		5.00	mg/L						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Blank (BEG0723-BLK2)					Prepared: 7/20/2023 Analyzed: 7/21/2023					
Alkalinity as CaCO3	ND		10.0	mg/L						
Carbonate as CaCO3	ND		1	mg/L						
Electrical Conductivity	ND		0.01	mmhos/cm						
Hydroxide as CaCO3	ND		1.00	mg/L						
pH	5.5		1.0	units						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Bicarbonate as CaCO3	ND		5.00	mg/L						
Blank (BEG0723-BLK3)					Prepared: 7/20/2023 Analyzed: 7/21/2023					
pH	5.4		1.0	units						
Alkalinity as CaCO3	ND		10.0	mg/L						
Hydroxide as CaCO3	ND		1.00	mg/L						
Carbonate as CaCO3	ND		1	mg/L						
Electrical Conductivity	ND		0.01	mmhos/cm						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Bicarbonate as CaCO3	ND		5.00	mg/L						
Duplicate (BEG0723-DUP1)		**Source: 23G1243-11**			Prepared: 7/20/2023 Analyzed: 7/21/2023					
Alkalinity as CaCO3	380		10.0	mg/L		367			3.50	10
pH	8.0		1.0	units		8.0			0.00	10
Carbonate as CaCO3	ND		1	mg/L		ND				10
Hydroxide as CaCO3	ND		1.00	mg/L		ND				10
Electrical Conductivity	0.95		0.01	mmhos/cm		0.97			1.22	10
Electrical Conductivity umhos	954		10.0	umhos/cm		965			1.22	10
Duplicate (BEG0723-DUP2)		**Source: 23G1309-02**			Prepared: 7/20/2023 Analyzed: 7/21/2023					
Electrical Conductivity	0.23		0.01	mmhos/cm		0.24			0.255	10
pH	9.1		1.0	units		9.2			0.219	10
Hydroxide as CaCO3	ND		1.00	mg/L		ND				10
Alkalinity as CaCO3	93.8		10.0	mg/L		93.5			0.406	10
Carbonate as CaCO3	14		1	mg/L		14			0.00	10
Electrical Conductivity umhos	235		10.0	umhos/cm		236			0.255	10
Reference (BEG0723-SRM1)					Prepared: 7/20/2023 Analyzed: 7/21/2023					

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Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0723 (Continued)										
Reference (BEG0723-SRM1)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
Electrical Conductivity	518			umhos/cm	538.0		96.2	90-110		
Alkalinity as CaCO3	39.6			mg/L	40.60		97.5	90-110		
Reference (BEG0723-SRM2)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
Electrical Conductivity	535			umhos/cm	538.0		99.5	90-110		
Alkalinity as CaCO3	40.0			mg/L	40.60		98.4	90-110		
Reference (BEG0723-SRM3)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
Electrical Conductivity	556			umhos/cm	538.0		103	90-110		
Alkalinity as CaCO3	41.1			mg/L	40.60		101	90-110		
Reference (BEG0723-SRM4)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
pH	4.0			units	4.000		100	97.5-102.5		
Reference (BEG0723-SRM5)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
pH	4.0			units	4.000		100	97.5-102.5		
Reference (BEG0723-SRM6)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
pH	4.0			units	4.000		100	97.5-102.5		
Reference (BEG0723-SRM7)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
pH	7.9			units	7.790		101	.7163-101.28		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0735										
Blank (BEG0735-BLK1)					Prepared: 7/20/2023 Analyzed: 7/26/2023					
Sodium	ND		1	mg/L						
Potassium	ND		0.500	mg/L						
Calcium	ND		0.1	mg/L						
Magnesium	ND		0.1	mg/L						
Blank (BEG0735-BLK2)					Prepared: 7/20/2023 Analyzed: 7/26/2023					
Potassium	ND		0.500	mg/L						
Sodium	ND		1	mg/L						
Calcium	ND		0.1	mg/L						
Magnesium	ND		0.1	mg/L						
LCS (BEG0735-BS1)					Prepared: 7/20/2023 Analyzed: 7/26/2023					
Sodium	39		1	mg/L	35.71		110	90-110		
Calcium	38.6		0.1	mg/L	35.71		108	90-110		
Potassium	38.6		0.500	mg/L	35.71		108	90-110		
Magnesium	37.2		0.1	mg/L	35.71		104	90-110		
LCS (BEG0735-BS2)					Prepared: 7/20/2023 Analyzed: 7/26/2023					
Potassium	39.6		0.500	mg/L	35.71		111	90-110		
Calcium	39.7		0.1	mg/L	35.71		111	90-110		
Sodium	40		1	mg/L	35.71		113	90-110		
Magnesium	40.6		0.1	mg/L	35.71		114	90-110		
Duplicate (BEG0735-DUP1)		**Source: 23G1243-15**			Prepared: 7/20/2023 Analyzed: 7/26/2023					
Calcium	60.5		0.1	mg/L		60.7			0.247	15
Sodium	70		1	mg/L		71			0.863	15
Potassium	0.640		0.500	mg/L		0.608			5.09	15
Magnesium	76.7		0.1	mg/L		77.5			1.01	15
Matrix Spike (BEG0735-MS1)		**Source: 23G1243-15**			Prepared: 7/20/2023 Analyzed: 7/26/2023					
Sodium	108		1	mg/L	35.71	71	105	90-110		
Potassium	37.6		0.500	mg/L	35.71	0.608	104	90-110		
Calcium	96.7		0.1	mg/L	35.71	60.7	101	90-110		
Magnesium	113		0.1	mg/L	35.71	77.5	100	90-110		
Matrix Spike (BEG0735-MS2)		**Source: 23G1395-01**			Prepared: 7/20/2023 Analyzed: 7/26/2023					
Potassium	39.6		0.500	mg/L	35.71	0.660	109	90-110		
Sodium	88		1	mg/L	35.71	52	99.5	90-110		
Calcium	76.3		0.1	mg/L	35.71	40.6	99.9	90-110		
Magnesium	107		0.1	mg/L	35.71	71.9	98.2	90-110		
Reference (BEG0735-SRM2)					Prepared: 7/20/2023 Analyzed: 7/26/2023					
Potassium	22.0			mg/L	21.90		100	90-110		

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Tulare, CA 93274

Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:55
Reported: 07/27/2023 10:53

Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0735 (Continued)										
Reference (BEG0735-SRM2)					Prepared: 7/20/2023	Analyzed: 7/26/2023				
Sodium	95			mg/L	91.50		104	90-110		
Reference (BEG0735-SRM3)					Prepared: 7/20/2023	Analyzed: 7/26/2023				
Calcium	84.7			mg/L	79.00		107	90-110		
Magnesium	33.5			mg/L	30.60		109	90-110		

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07/18/23 07:55 23G1309

EDS

DELLAVALLE LABORATORY, INC.

1910 W. McKinley Avenue, Suite 110 • Fresno, CA 93728
www.dellavallelab.com 559 233-6129 • 800 228-9896 • Fax 559 268-8174

WATER WORK REQUEST

Bill To: Acct No. 13898 Cons. 23

Purchase Order No. Results Needed By

No. of Samples ~~1~~ AK 2 No. Bottles ~~1~~ AK 2

Water Type:
- [x] Ag Water
- [ ] Supply Water
- [ ] Drinking
- [ ] Ground Water
- [ ] Other
- [ ] Wastewater
- [ ] Mon. Well

Client: **Holstein Farms**
Address: 4639 Ave 176
City, State, Zip: Tulare, CA 93274
Email: cherylleyendekker@gmail.com

Copy to: jvanderschuur@ppeng.com, sbommelje@ppeng.com, Mark.Rip@nutrien.com

Requested by/Cell: Mark 804-6242

Facility: 4639 Ave 176, Tulare

Date sampled: 07-17-2023

Sampled by: Andrew Koetsier

[x] QA/QC Document [x] Copy of Chain [ ] RWQCB

Analysis and Bottles Required: *(Please Indicate Analysis)*

- [ ] DWW1: (EC, pH, NO_3-N, **NH_4-N Field Test**)
  (1) 1 L plastic, unpreserved (white)
- [x] DWW2: (DWW1 Plus SO_4, CO_3, HCO_3, Cl, Ca, Mg, Na, TDS)
  (1) 1 L plastic, unpreserved (white)
- [ ] DCW1: (EC, NO_3-N, TDS)
  (1) 1 L plastic, unpreserved (white)
- [ ] DPW1: (EC, pH, NO_3-N, NH_4-N, TKN, TDS, TP, TK)
  (1) 1 L plastic, unpreserved (white)
- [ ] DPW2: (DPW1 Plus Ca, Mg, Na, HCO_3, CO_3, SO_4, Cl)
  (1) 1 L plastic, unpreserved (white)
- [ ] Other

DESCRIPTION OF SAMPLES

			Date Sampled	Time Sampled	Field NH4-N (mg/L)	Received Temp °C
1.	BD Dom	Sampled From: Pressure Tank	07-17-2023	6:30am	0	-0.9
2.	Well #7	Sampled From: Standpipe	"	7:02am	0	-0.6
3.	~~BD Irg Well~~ AK	Sampled From:				
4.		Sampled From:				
5.		Sampled From:				
6.		Sampled From:				
7.		Sampled From:				
8.		Sampled From:				
9.		Sampled From:				
10.		Sampled From:				

IR Thermometer SN: 200560723
Correction Factor: 0°C
Calibration Due: 9/26/2023
Location: Laboratory

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	AK	DLI	07-17-2023 / 6:30am	
Second	MM	DLI	7/18 7:55	
Third				
Fourth				

I guarantee that as the client, or on behalf of the client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorneys' fees. It is understood that payment is expected to be cash with samples unless terms have been previously arranged. Terms are net 30 days; overdue accounts will be charged a dated damage fee of 2% per month (annually 24 %) or $5.00 per month whichever is greater.

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

Invoicing Information:
Contract 2023
Sampling Hrs ____ Miles ____ Consulting ____
Amt Paid ____ Rec By ____ Check No. ____ Date ____

Shipping
$ ____ In
$ ____ Out

Signature ____

Sample received in cooler with ice?
[ ] Yes [ ] No

ctt update 2020

07/18/23 07:55 23G1309

Shipping Information: Shipped In ☐ Picked-Up ☐ Walk In ☐ DLI Sampler ☑ Other ☐ _____

☐ Samples refrigerated before pick up | ☐ Picked up samples placed in Ice chest

Container: Ice Chest ☑ Box ☐ None ☐ | **Refrigerant:** Wet Ice ☑ Blue Ice ☐ None ☐

Samples Preserved with HNO_3 or H_2SO_4 were: ☐ Received Preserved ☐ Preserved Upon Receipt at Laboratory

	Type of Container(s) Received	Sample Number 1	2	3	4	5	6	7	8	9	10
	Sample Containers for Internal (DLI) Use *(Containers that go into the Lab)*										
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
	250 mL unpreserved (White) Plastic	✓	✓								
	250 mL HNO_3 (Red) Plastic										
	* pH Value										
	250 mL H_2SO_4 (Yellow) Plastic										
	* pH Value										
	500 mL unpreserved (White) Plastic										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
Special	500mL unpreserved (White) Glass										
	PO4-P Kit										
	Other:										
	Sample Containers for Subcontracted ("Send Out") Analyses *(Containers that go in the Subcontract ("Send Out") Refrigerator)*										
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
	250 mL unpreserved (White) Plastic										
	250 mL HNO_3 (Red) Plastic										
	250 mL H_2SO_4 (Yellow) Plastic										
	500 mL HNO_3 (Red)										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
	1 L HNO_3 (Red)										
VOA Vials	40 mL VOA, $Na_2S_2O_3$ + MCAA (EPA531)										
	40 mL VOA, $Na_2S_2O_3$ (EPA547)										
	40mL AG VOA unpreserved (White) (Set of 3)										
	40 mL AG VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
	40mL VOA, H_3PO_4 (Set of 3)										
	40 mL VOA, HCl (Blue) (Set of 3)										
	40 mL VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
Glass	250 mL AG unpreserved (White)										
	250 mL AG H_2SO_4 (Yellow)										
	250 mL AG $Na_2S_2O_3$ (Green)										
	250 mL AG $Na_2S_2O_3$ + MCAA										
	500 mL glass unpreserved (White)										
	500 mL AG HCl (Blue)										
	1 L AG unpreserved (White)										
	1 L AG H_2SO_4 (Yellow)										
	1 L AG $Na_2S_2O_3$ (Green)										
	1 L AG HCl (Blue)										
Special	Cr^{6+} - 50mL Plastic w/Borate/HCO_3/CO_3										
	Cyanide - 500 mL NaOH										
	Asbestos - 1L P wrapped in foil (Set of 2)										
	Sulfide - 1 L **AG** or **P** NaOH + ZnAc										
	Chlorite/Bromate - 250 mL AG with EDA										
	HAA5 - 250mL AG Ammonium Chlorite										
	DO KIT										
	Other:										

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LABORATORY INC

Holstein Farms
4639 Ave 176
Tulare, CA 93274

Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:55
Reported: 07/27/2023 10:53

Samples in this Report

Lab ID	Sample	Matrix	Sampled By	Crop	Date Sampled
23G1309-01	BD Dom (Pressure Tank)	Ag Water	Andrew Koetsier		07/17/2023 6:30
23G1309-02	Well #7 (Standpipe)	Ag Water	Andrew Koetsier		07/17/2023 7:02

Default Cooler Temperature on Receipt °C: -0.9
Containers Intact
COC/Labels Agree
Received On Ice

Notes and Definitions

Item	Definition
H	Hold Time Exceeded
MCL	Drinking Water Maximum Contaminant Level
ND	Analyte NOT DETECTED at or above the reporting limit.
NES	Not Enough Sample
*	Not Taken
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

Scott McFriedland

Laboratory Director/Technical Manager

ELAP Certification #1595
A2LA Certification #6440.02

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Sample Results

Sample: BD Dom (Pressure Tank)
23G1309-01 (Water)

Sampled: 7/17/2023 6:30
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Alkalinity as CaCO3	**177**	mg/L	10.0	1		07/21/23 17:24	SM 2320 B		BEG0723
Calcium	**116**	mg/L	0.1	1		07/26/23 11:49	EPA 200.7		BEG0735
Chloride	**41.4**	mg/L	0.2	1	250	07/18/23 21:19	EPA 300.0		BEG0581
Carbonate as CaCO3	ND	mg/L	1	1		07/21/23 17:24	SM 2320 B		BEG0723
Electrical Conductivity	**0.90**	mmhos/cm	0.01	1		07/21/23 17:24	SM 2510 B		BEG0723
Electrical Conductivity umhos	**903**	umhos/cm	10.0	1		07/21/23 17:24	SM 2510 B		BEG0723
Bicarbonate as CaCO3	**177**	mg/L	5.00	1		07/21/23 17:24	SM 2320 B		BEG0723
Potassium	ND	mg/L	0.500	1		07/26/23 11:49	EPA 200.7		BEG0735
Magnesium	**5.6**	mg/L	0.1	1		07/26/23 11:49	EPA 200.7		BEG0735
Sodium	**56**	mg/L	1	1		07/26/23 11:49	EPA 200.7		BEG0735
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 06:30	Field		BEG1057
Nitrate Nitrogen as NO3N	**39.7**	mg/L	0.1	1	10	07/18/23 21:19	EPA 300.0		BEG0581
Hydroxide as CaCO3	ND	mg/L	1.00	1		07/21/23 17:24	SM 2320 B		BEG0723
pH	**7.8**	units	1.0	1		07/21/23 17:24	SM 4500-H+	H	BEG0723
Sulfate (SO4)	**58.8**	mg/L	0.5	1	250	07/18/23 21:19	EPA 300.0		BEG0581
Total Filterable Solids (TDS)	**660**	mg/L	10.0	1		07/21/23 16:55	SM 2540 C		BEG0573

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Sample Results
(Continued)

Sample: Well #7 (Standpipe)
23G1309-02 (Water)

Sampled: 7/17/2023 7:02
Sampled By: Andrew Koetsier

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Alkalinity as CaCO3	**93.5**	mg/L	10.0	1		07/21/23 17:29	SM 2320 B		BEG0723
Calcium	**2.5**	mg/L	0.1	1		07/26/23 11:50	EPA 200.7		BEG0735
Chloride	**8.2**	mg/L	0.2	1	250	07/18/23 21:38	EPA 300.0		BEG0581
Carbonate as CaCO3	**14**	mg/L	1	1		07/21/23 17:29	SM 2320 B		BEG0723
Electrical Conductivity	**0.24**	mmhos/cm	0.01	1		07/21/23 17:29	SM 2510 B		BEG0723
Electrical Conductivity umhos	**236**	umhos/cm	10.0	1		07/21/23 17:29	SM 2510 B		BEG0723
Bicarbonate as CaCO3	**79.1**	mg/L	5.00	1		07/21/23 17:29	SM 2320 B		BEG0723
Potassium	ND	mg/L	0.500	1		07/26/23 11:50	EPA 200.7		BEG0735
Magnesium	ND	mg/L	0.1	1		07/26/23 11:50	EPA 200.7		BEG0735
Sodium	**56**	mg/L	1	1		07/26/23 11:50	EPA 200.7		BEG0735
Ammonia (as N)	ND	mg/L	0.00	1		07/17/23 07:02	Field		BEG1057
Nitrate Nitrogen as NO3N	ND	mg/L	0.1	1	10	07/18/23 21:38	EPA 300.0		BEG0581
Hydroxide as CaCO3	ND	mg/L	1.00	1		07/21/23 17:29	SM 2320 B		BEG0723
pH	**9.2**	units	1.0	1		07/21/23 17:29	SM 4500-H+	H	BEG0723
Sulfate (SO4)	**8.7**	mg/L	0.5	1	250	07/18/23 21:38	EPA 300.0		BEG0581
Total Filterable Solids (TDS)	**197**	mg/L	10.0	1		07/21/23 16:55	SM 2540 C		BEG0573

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Quality Control

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0573										
Blank (BEG0573-BLK1)					Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	ND		10.0	mg/L						
LCS (BEG0573-BS1)					Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	28.8		10.0	mg/L	2000		1.44	0-200		
Duplicate (BEG0573-DUP1)		**Source: 23G0065-01**			Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	775		10.0	mg/L		770			0.647	10
Duplicate (BEG0573-DUP2)		**Source: 23G1308-01**			Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	1420		10.0	mg/L		1400			1.77	10
Reference (BEG0573-SRM1)					Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	330			mg/L	325.0		102	90-110		
Reference (BEG0573-SRM2)					Prepared: 7/18/2023	Analyzed: 7/21/2023				
Total Filterable Solids (TDS)	500			mg/L	495.0		101	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0581										
Blank (BEG0581-BLK1)					Prepared & Analyzed: 7/18/2023					
Chloride	ND		0.2	mg/L						
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Sulfate (SO4)	ND		0.5	mg/L						
Blank (BEG0581-BLK2)					Prepared & Analyzed: 7/18/2023					
Chloride	ND		0.2	mg/L						
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Sulfate (SO4)	ND		0.5	mg/L						
Blank (BEG0581-BLK3)					Prepared & Analyzed: 7/19/2023					
Chloride	ND		0.2	mg/L						
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Sulfate (SO4)	ND		0.5	mg/L						
LCS (BEG0581-BS1)					Prepared & Analyzed: 7/18/2023					
Chloride	4.8		0.2	mg/L	5.000		96.7	90-110		
Nitrate Nitrogen as NO3N	5.0		0.1	mg/L	5.000		100	90-110		
Sulfate (SO4)	4.6		0.5	mg/L	5.000		92.8	90-110		
LCS (BEG0581-BS2)					Prepared & Analyzed: 7/19/2023					
Chloride	4.9		0.2	mg/L	5.000		98.2	90-110		
Nitrate Nitrogen as NO3N	5.1		0.1	mg/L	5.000		101	90-110		
Sulfate (SO4)	4.6		0.5	mg/L	5.000		92.0	90-110		
Duplicate (BEG0581-DUP1)		**Source: 23G1236-01**			Prepared & Analyzed: 7/18/2023					
Chloride	6.9		0.2	mg/L		6.9			0.377	10
Nitrate Nitrogen as NO3N	0.2		0.1	mg/L		0.2			0.00	10
Sulfate (SO4)	25.8		0.5	mg/L		25.9			0.201	10
Duplicate (BEG0581-DUP2)		**Source: 23G1309-02**			Prepared & Analyzed: 7/19/2023					
Chloride	8.2		0.2	mg/L		8.2			0.109	10
Nitrate Nitrogen as NO3N	0.03		0.1	mg/L		0.03			0.00	10
Sulfate (SO4)	8.7		0.5	mg/L		8.7			0.449	10
Matrix Spike (BEG0581-MS1)		**Source: 23G1236-01**			Prepared & Analyzed: 7/18/2023					
Chloride	12.0		0.2	mg/L	5.000	6.9	102	90-110		
Nitrate Nitrogen as NO3N	5.1		0.1	mg/L	5.000	0.2	98.6	90-110		
Sulfate (SO4)	31.2		0.5	mg/L	5.000	25.9	106	90-110		
Matrix Spike (BEG0581-MS2)		**Source: 23G1309-02**			Prepared & Analyzed: 7/19/2023					
Chloride	13.2		0.2	mg/L	5.000	8.2	98.4	90-110		
Nitrate Nitrogen as NO3N	5.1		0.1	mg/L	5.000	0.03	102	90-110		
Sulfate (SO4)	13.8		0.5	mg/L	5.000	8.7	102	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0581 (Continued)										
Reference (BEG0581-SRM1)					Prepared & Analyzed: 7/18/2023					
Chloride	12.8			mg/L	12.50		102	90-110		
Nitrate Nitrogen as NO3N	10.2			mg/L	10.00		102	90-110		
Sulfate (SO4)	10.0			mg/L	10.00		100	90-110		
Reference (BEG0581-SRM2)					Prepared & Analyzed: 7/18/2023					
Chloride	12.7			mg/L	12.50		102	90-110		
Nitrate Nitrogen as NO3N	10.2			mg/L	10.00		102	90-110		
Sulfate (SO4)	9.9			mg/L	10.00		99.3	90-110		
Reference (BEG0581-SRM3)					Prepared & Analyzed: 7/19/2023					
Chloride	12.7			mg/L	12.50		102	90-110		
Nitrate Nitrogen as NO3N	10.2			mg/L	10.00		102	90-110		
Sulfate (SO4)	10.0			mg/L	10.00		99.5	90-110		

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Reported: 07/27/2023 10:53

Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0723										
Blank (BEG0723-BLK1)					Prepared: 7/20/2023 Analyzed: 7/21/2023					
Alkalinity as CaCO3	ND		10.0	mg/L						
Carbonate as CaCO3	ND		1	mg/L						
pH	5.4		1.0	units						
Hydroxide as CaCO3	ND		1.00	mg/L						
Electrical Conductivity	ND		0.01	mmhos/cm						
Bicarbonate as CaCO3	ND		5.00	mg/L						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Blank (BEG0723-BLK2)					Prepared: 7/20/2023 Analyzed: 7/21/2023					
Alkalinity as CaCO3	ND		10.0	mg/L						
Carbonate as CaCO3	ND		1	mg/L						
Electrical Conductivity	ND		0.01	mmhos/cm						
Hydroxide as CaCO3	ND		1.00	mg/L						
pH	5.5		1.0	units						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Bicarbonate as CaCO3	ND		5.00	mg/L						
Blank (BEG0723-BLK3)					Prepared: 7/20/2023 Analyzed: 7/21/2023					
pH	5.4		1.0	units						
Alkalinity as CaCO3	ND		10.0	mg/L						
Hydroxide as CaCO3	ND		1.00	mg/L						
Carbonate as CaCO3	ND		1	mg/L						
Electrical Conductivity	ND		0.01	mmhos/cm						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
Bicarbonate as CaCO3	ND		5.00	mg/L						
Duplicate (BEG0723-DUP1)		**Source: 23G1243-11**			Prepared: 7/20/2023 Analyzed: 7/21/2023					
Alkalinity as CaCO3	380		10.0	mg/L		367			3.50	10
pH	8.0		1.0	units		8.0			0.00	10
Carbonate as CaCO3	ND		1	mg/L		ND				10
Hydroxide as CaCO3	ND		1.00	mg/L		ND				10
Electrical Conductivity	0.95		0.01	mmhos/cm		0.97			1.22	10
Electrical Conductivity umhos	954		10.0	umhos/cm		965			1.22	10
Duplicate (BEG0723-DUP2)		**Source: 23G1309-02**			Prepared: 7/20/2023 Analyzed: 7/21/2023					
Electrical Conductivity	0.23		0.01	mmhos/cm		0.24			0.255	10
pH	9.1		1.0	units		9.2			0.219	10
Hydroxide as CaCO3	ND		1.00	mg/L		ND				10
Alkalinity as CaCO3	93.8		10.0	mg/L		93.5			0.406	10
Carbonate as CaCO3	14		1	mg/L		14			0.00	10
Electrical Conductivity umhos	235		10.0	umhos/cm		236			0.255	10
Reference (BEG0723-SRM1)					Prepared: 7/20/2023 Analyzed: 7/21/2023					

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DELLAVALLE™ LABORATORY INC

Holstein Farms
4639 Ave 176
Tulare, CA 93274

Account# 00-0013898
Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:55
Reported: 07/27/2023 10:53

Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0723 (Continued)										
Reference (BEG0723-SRM1)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
Electrical Conductivity	518			umhos/cm	538.0		96.2	90-110		
Alkalinity as CaCO3	39.6			mg/L	40.60		97.5	90-110		
Reference (BEG0723-SRM2)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
Electrical Conductivity	535			umhos/cm	538.0		99.5	90-110		
Alkalinity as CaCO3	40.0			mg/L	40.60		98.4	90-110		
Reference (BEG0723-SRM3)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
Electrical Conductivity	556			umhos/cm	538.0		103	90-110		
Alkalinity as CaCO3	41.1			mg/L	40.60		101	90-110		
Reference (BEG0723-SRM4)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
pH	4.0			units	4.000		100	97.5-102.5		
Reference (BEG0723-SRM5)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
pH	4.0			units	4.000		100	97.5-102.5		
Reference (BEG0723-SRM6)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
pH	4.0			units	4.000		100	97.5-102.5		
Reference (BEG0723-SRM7)					Prepared: 7/20/2023	Analyzed: 7/21/2023				
pH	7.9			units	7.790		101	.7163-101.28		

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Ranch: 4639 Ave 176, Tulare

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0735										
Blank (BEG0735-BLK1)					Prepared: 7/20/2023 Analyzed: 7/26/2023					
Sodium	ND		1	mg/L						
Potassium	ND		0.500	mg/L						
Calcium	ND		0.1	mg/L						
Magnesium	ND		0.1	mg/L						
Blank (BEG0735-BLK2)					Prepared: 7/20/2023 Analyzed: 7/26/2023					
Potassium	ND		0.500	mg/L						
Sodium	ND		1	mg/L						
Calcium	ND		0.1	mg/L						
Magnesium	ND		0.1	mg/L						
LCS (BEG0735-BS1)					Prepared: 7/20/2023 Analyzed: 7/26/2023					
Sodium	39		1	mg/L	35.71		110	90-110		
Calcium	38.6		0.1	mg/L	35.71		108	90-110		
Potassium	38.6		0.500	mg/L	35.71		108	90-110		
Magnesium	37.2		0.1	mg/L	35.71		104	90-110		
LCS (BEG0735-BS2)					Prepared: 7/20/2023 Analyzed: 7/26/2023					
Potassium	39.6		0.500	mg/L	35.71		111	90-110		
Calcium	39.7		0.1	mg/L	35.71		111	90-110		
Sodium	40		1	mg/L	35.71		113	90-110		
Magnesium	40.6		0.1	mg/L	35.71		114	90-110		
Duplicate (BEG0735-DUP1)		**Source: 23G1243-15**			Prepared: 7/20/2023 Analyzed: 7/26/2023					
Calcium	60.5		0.1	mg/L		60.7			0.247	15
Sodium	70		1	mg/L		71			0.863	15
Potassium	0.640		0.500	mg/L		0.608			5.09	15
Magnesium	76.7		0.1	mg/L		77.5			1.01	15
Matrix Spike (BEG0735-MS1)		**Source: 23G1243-15**			Prepared: 7/20/2023 Analyzed: 7/26/2023					
Sodium	108		1	mg/L	35.71	71	105	90-110		
Potassium	37.6		0.500	mg/L	35.71	0.608	104	90-110		
Calcium	96.7		0.1	mg/L	35.71	60.7	101	90-110		
Magnesium	113		0.1	mg/L	35.71	77.5	100	90-110		
Matrix Spike (BEG0735-MS2)		**Source: 23G1395-01**			Prepared: 7/20/2023 Analyzed: 7/26/2023					
Potassium	39.6		0.500	mg/L	35.71	0.660	109	90-110		
Sodium	88		1	mg/L	35.71	52	99.5	90-110		
Calcium	76.3		0.1	mg/L	35.71	40.6	99.9	90-110		
Magnesium	107		0.1	mg/L	35.71	71.9	98.2	90-110		
Reference (BEG0735-SRM2)					Prepared: 7/20/2023 Analyzed: 7/26/2023					
Potassium	22.0			mg/L	21.90		100	90-110		

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4639 Ave 176
Tulare, CA 93274

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Account Manager: Andrew Koetsier
Submitted By: Mark
Ranch: 4639 Ave 176, Tulare

Received: 07/18/2023 7:55
Reported: 07/27/2023 10:53

Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0735 (Continued)										
Reference (BEG0735-SRM2)					Prepared: 7/20/2023	Analyzed: 7/26/2023				
Sodium	95			mg/L	91.50		104	90-110		
Reference (BEG0735-SRM3)					Prepared: 7/20/2023	Analyzed: 7/26/2023				
Calcium	84.7			mg/L	79.00		107	90-110		
Magnesium	33.5			mg/L	30.60		109	90-110		

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07/18/23 07:55 23G1309

EDS

DELLAVALLE LABORATORY, INC.

1910 W. McKinley Avenue, Suite 110 • Fresno, CA 93728
www.dellavallelab.com 559 233-6129 • 800 228-9896 • Fax 559 268-8174

WATER WORK REQUEST

Bill To: Acct No. 13898 Cons. 23

Purchase Order No. Results Needed By

No. of Samples ~~1~~ AK 2 No. Bottles ~~1~~ AK 2

Water Type:
- [x] Ag Water
- [ ] Supply Water
- [ ] Drinking
- [ ] Ground Water
- [ ] Other
- [ ] Wastewater
- [ ] Mon. Well

Client: **Holstein Farms**
Address: 4639 Ave 176
City, State, Zip: Tulare, CA 93274
Email: cherylleyendekker@gmail.com

Copy to: jvanderschuur@ppeng.com, sbommelje@ppeng.com, Mark.Rip@nutrien.com

Requested by/Cell: Mark 804-6242

Facility: 4639 Ave 176, Tulare

Date sampled: 07-17-2023

Sampled by: Andrew Koetsier

[x] QA/QC Document [x] Copy of Chain [ ] RWQCB

Analysis and Bottles Required: *(Please Indicate Analysis)*

- [ ] DWW1: (EC, pH, NO_3-N, **NH_4-N Field Test**)
  (1) 1 L plastic, unpreserved (white)
- [x] DWW2: (DWW1 Plus SO_4, CO_3, HCO_3, Cl, Ca, Mg, Na, TDS)
  (1) 1 L plastic, unpreserved (white)
- [ ] DCW1: (EC, NO_3-N, TDS)
  (1) 1 L plastic, unpreserved (white)
- [ ] DPW1: (EC, pH, NO_3-N, NH_4-N, TKN, TDS, TP, TK)
  (1) 1 L plastic, unpreserved (white)
- [ ] DPW2: (DPW1 Plus Ca, Mg, Na, HCO_3, CO_3, SO_4, Cl)
  (1) 1 L plastic, unpreserved (white)
- [ ] Other

DESCRIPTION OF SAMPLES

			Date Sampled	Time Sampled	Field NH4-N (mg/L)	Received Temp °C
1.	BD Dom	Sampled From: Pressure Tank	07-17-2023	6:30am	0	-0.9
2.	Well #7	Sampled From: Standpipe	"	7:02am	0	-0.6
3.	~~BD Irg Well~~ AK	Sampled From:				
4.		Sampled From:				
5.		Sampled From:				
6.		Sampled From:				
7.		Sampled From:				
8.		Sampled From:				
9.		Sampled From:				
10.		Sampled From:				

IR Thermometer SN: 200560723
Correction Factor: 0°C
Calibration Due: 9/26/2023
Location: Laboratory

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	AK	DLI	07-17-2023 / 6:30am	
Second	MM	DLI	7/18 7:55	
Third				
Fourth				

I guarantee that as the client, or on behalf of the client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorneys' fees. It is understood that payment is expected to be cash with samples unless terms have been previously arranged. Terms are net 30 days; overdue accounts will be charged a dated damage fee of 2% per month (annually 24 %) or $5.00 per month whichever is greater.

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

Invoicing Information:
Contract 2023
Sampling Hrs ____ Miles ____ Consulting ____
Amt Paid ____ Rec By ____ Check No. ____ Date ____

Shipping
$ ____ In
$ ____ Out

Signature ____

Sample received in cooler with ice?
[ ] Yes [ ] No

ctt update 2020

07/18/23 07:55 23G1309

Shipping Information: Shipped In ☐ Picked-Up ☐ Walk In ☐ DLI Sampler ☑ Other ☐ _____

☐ Samples refrigerated before pick up | ☐ Picked up samples placed in Ice chest

Container: Ice Chest ☑ Box ☐ None ☐ | **Refrigerant:** Wet Ice ☑ Blue Ice ☐ None ☐

Samples Preserved with HNO_3 or H_2SO_4 were: ☐ Received Preserved ☐ Preserved Upon Receipt at Laboratory

	Type of Container(s) Received	Sample Number 1	2	3	4	5	6	7	8	9	10
	Sample Containers for Internal (DLI) Use *(Containers that go into the Lab)*										
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
	250 mL unpreserved (White) Plastic	✓	✓								
	250 mL HNO_3 (Red) Plastic										
	* pH Value										
	250 mL H_2SO_4 (Yellow) Plastic										
	* pH Value										
	500 mL unpreserved (White) Plastic										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
Special	500mL unpreserved (White) Glass										
	PO4-P Kit										
	Other:										
	Sample Containers for Subcontracted ("Send Out") Analyses *(Containers that go in the Subcontract ("Send Out") Refrigerator)*										
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
	250 mL unpreserved (White) Plastic										
	250 mL HNO_3 (Red) Plastic										
	250 mL H_2SO_4 (Yellow) Plastic										
	500 mL HNO_3 (Red)										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
	1 L HNO_3 (Red)										
VOA Vials	40 mL VOA, $Na_2S_2O_3$ + MCAA (EPA531)										
	40 mL VOA, $Na_2S_2O_3$ (EPA547)										
	40mL AG VOA unpreserved (White) (Set of 3)										
	40 mL AG VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
	40mL VOA, H_3PO_4 (Set of 3)										
	40 mL VOA, HCl (Blue) (Set of 3)										
	40 mL VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
Glass	250 mL AG unpreserved (White)										
	250 mL AG H_2SO_4 (Yellow)										
	250 mL AG $Na_2S_2O_3$ (Green)										
	250 mL AG $Na_2S_2O_3$ + MCAA										
	500 mL glass unpreserved (White)										
	500 mL AG HCl (Blue)										
	1 L AG unpreserved (White)										
	1 L AG H_2SO_4 (Yellow)										
	1 L AG $Na_2S_2O_3$ (Green)										
	1 L AG HCl (Blue)										
Special	Cr^{6+} - 50mL Plastic w/Borate/HCO_3/CO_3										
	Cyanide - 500 mL NaOH										
	Asbestos - 1L P wrapped in foil (Set of 2)										
	Sulfide - 1 L **AG** or **P** NaOH + ZnAc										
	Chlorite/Bromate - 250 mL AG with EDA										
	HAA5 - 250mL AG Ammonium Chlorite										
	DO KIT										
	Other:										