



Sun Valley

2023 Annual Report

<u><input checked="" type="checkbox"/></u> Report Form	<u><input type="checkbox"/></u> Attachment H
<u><input checked="" type="checkbox"/></u> Attachment A	<u><input type="checkbox"/></u> Attachment I
<u><input checked="" type="checkbox"/></u> Attachment B	<u><input type="checkbox"/></u> Attachment J
<u><input checked="" type="checkbox"/></u> Attachment C	<u><input type="checkbox"/></u> Manure Tracking Manifests
<u><input checked="" type="checkbox"/></u> Attachment D	<u><input type="checkbox"/></u> New or Revised Waste Water Agreements
<u><input checked="" type="checkbox"/></u> Attachment E	<u><input type="checkbox"/></u> Groundwater Monitoring Samples
<u><input checked="" type="checkbox"/></u> Attachment F	<u><input type="checkbox"/></u> Monitoring Well Report
<u><input checked="" type="checkbox"/></u> Attachment G	<u><input type="checkbox"/></u> Owner/Operator Change Form

Enclosed are the required documents to be submitted to the Regional Water Quality Control Board Central Valley Region in compliance with Order No. R5-2013-0122 Waste Discharge Requirements, General Order for Existing Milk Cow Dairies for July 1, 2024.

(See attached delivery confirmation)

Annual Report

Sun Valley 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Facility Information:

Name of Dairy	Sun Valley
Facility Address	255 Road 128, Delano CA 93215

Owner/Operator as of 12/31/2023

Operator Name	Myron Schotanus
Operator Phone	(559) 804-4997
Owner Name	Myron Schotanus
Owner Phone	(559) 804-4997

1. Beginning and end dates of the annual reporting period: crops harvested January 1, 2023 through December 31, 2023.
2. Maximum and average number and type of animals (see Attachment A).
3. Estimated amount of total manure and process wastewater generated by the facility (see Attachment A).
4. Estimated amount of total manure and process wastewater applied to each land application area (see Attachment B).
5. Quantified ratio of total nitrogen applied to land application areas and total nitrogen removed by crop harvest (see Attachment B).
6. Estimated amount of total manure and process wastewater transferred to other persons by the facility (see Attachment C).
7. Total number of acres and the Assessor Parcel Numbers for all land application areas that were not used for application of manure or process wastewater (see Attachment D).
8. Total number of acres and the Assessor Parcel Numbers for all land application areas that were used for land application of manure and process wastewater (see Attachment D).

9. Summary of manure and process wastewater discharges from the production area

Provide 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 annual reporting period, including the date, time, location, approximate volume, a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows:

- No discharges occurred during the reporting period.
 Yes. _____ Number of discharges occurred (see Attachment H).



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10. Summary of storm water discharges from the production area

Provide a summary of all storm water discharges from the production area to surface water, that occurred during the annual reporting period, including the date, time, approximate volume, duration, location, a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows:

- No discharges occurred during the reporting period.
 Yes. _____ Number of discharges occurred (see Attachment I).

11. Summary of discharges from the land application area

Provide a summary of all discharges from the land application area to surface water, that occurred during the annual reporting period, including the date, time, approximate volume, location, source of discharge (i.e. tailwater, wastewater or blended wastewater), a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows:

- No discharges occurred during the reporting period.
 Yes. _____ Number of discharges occurred (see Attachment J).

12. Nutrient Management Plan update

Has the NMP been updated, and if so, was it updated by a Certified Nutrient Management Specialist?

- No.
 Yes, the new NMP was developed and approved by a Certified Nutrient Management Specialist.

13. Manure/Process Wastewater Tracking Manifests

Did you sell, give away, or otherwise remove manure or process wastewater from your property?

- No.
 Yes, see attached manifests.

14. Written Agreements

Any process wastewater transferred to a third party that receives process wastewater from your dairy for its own use must have a written agreement consistent with State requirements. Attach copies of revised and/or new agreements not submitted previously. Do not resubmit agreements submitted previously.

- Not applicable; no written agreements.
 No changes in agreement(s).
 Yes, a new or revised agreement is attached.

15. Laboratory Analyses for Discharges

If you answered Yes to items #9, 10, or 11 above, attach copies of all laboratory analyses for all discharges (manure, process wastewater or tailwater), surface water (upstream and downstream of a discharge), and storm water, including chain-of-custody forms and laboratory quality assurance/quality control results, as applicable. (Results for Manure and process wastewater, storm water, and/or storm water are provided).

- Not Applicable.
 Yes, provided with Attachment H, I, or J for #9, 10 and 11, respectively.

16. Tabulated Nutrient Analytical Data

Attach tabulated analytical data for samples of manure, process wastewater, irrigation water, soil, and plant tissue. The data shall be tabulated to clearly show sample dates, constituents analyzed, constituent concentrations, and detection limits (see Attachment E).



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17. Record-Keeping Results

Attach results of the Record-Keeping Requirements for the production and land application areas specified in Record-Keeping Requirements. These include:

- * Records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction.
- * Records of the date, time, and estimated volume of any overflow or bypass of the wastewater storage or conveyance structures.
- * Expected and actual crop yields (see Attachment F).
- * Identification of crop, acreage, and dates of planting and harvest for each field (see Attachment F).
- * Dates, locations, and approximate weight and moisture content of manure applied to each field (see Attachment B).
- * Dates, locations, and volume of process wastewater applied to each field (see Attachment B).
- * Whether precipitation occurred, or standing water was present at the time of manure and process wastewater applications and for 24 hours prior to and following applications (see Attachment G).
- * Total amount of nitrogen, phosphorus, and potassium actually applied to each field, including documentation of calculations for the total amount applied (see Attachment B).

18. Groundwater Monitoring Section

Groundwater monitoring results are attached.

Monitoring Well results are attached, if applicable.

A. All dischargers must attach groundwater information for supply wells and subsurface (tile) drainage systems including the location of sample collection and all field and laboratory data, including all laboratory analyses (including chain-of-custody forms and laboratory quality assurance/quality control results).

B. Dischargers who have monitoring well systems shall include all laboratory analyses (including chain-of-custody forms and laboratory quality assurance/quality control results) and tabular and graphical summaries of the monitoring data. Data shall be tabulated to clearly show the sample dates, constituents analyzed, constituent concentrations, detection limits, depth to groundwater and groundwater elevations. Graphical summaries of groundwater gradients and flow directions shall also be included. Each groundwater monitoring report shall include a summary data table for all historical and current groundwater elevations and analytical results. The groundwater monitoring results shall be certified by a California registered professional.

19. Storm Water Reporting Section

No significant discharges of storm water occurred from the land application areas.

Yes, significant discharge(s) of storm water occurred from land application areas. The following information shall be submitted for those discharges.

It was not possible to collect any of the required samples or perform visual observations due to adverse climatic conditions.

20. Mortality Management Practices

- * Dead cows are picked up and disposed of by rendering service.

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"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."

DocuSigned by:

Myron Schotanus

Signature 162FDCADD322459 of Facility

DocuSigned by:

Myron Schotanus

Signature 162FDCADD322459 of Owner of Facility

Myron Schotanus

Print Name

Myron Schotanus

Print Name

6/28/2024

Title and Date

6/28/2024

Title and Date

Sun Valley 2023

Estimated Manure and Nutrients Generated (Attachment A)

Animal Type	Maximum No. of Head	Average No. of Head*	Housing Type	Weight	Total Manure Produced (tons/year)	NITROGEN	PHOSPHORUS	POTASSIUM	SALTS
						Net (LB) Available for Land Application			
Hol Milk Cows	1,346	1,312	Milk Flushed Lane	1,400	33,297.10	474,091.20	81,409.60	110,142.40	864,857.28
Hol Dry Cows	362	352	Flushed	1,450	5,136.42	64,240.00	8,993.60	42,398.40	90,655.49
Hol Heifers(15-24)	325	316	Flushed	1,000	3,298.57	43,829.20	6,920.40	20,761.20	81,383.90
Hol Heifers (7-14)	530	516	Flushed	750	4,962.51	48,968.40	8,286.96	28,251.00	62,293.46
Hol Calves (4-6)	372	362	Flushed	300	1,255.24	18,498.20	5,285.20	10,570.40	8,667.73
Hol Calves (0-3)	375	365	Calves Dry Scrape	150	1,265.64	2,664.50	1,332.25	5,329.00	3,206.73
	3,310	3,223			49,215.49	652,291.50	112,228.01	217,452.40	1,111,064.58

* The Average No. of Head is used to calculate manure and nutrient production

Estimated Amount of Total Process Wastewater and Nutrients Generated

Total Gallons of Process Wastewater Generated***	Average TKN Concentration (mg/L)*	Average Total Phosphorus Concentration (mg/L)*	Average Potassium Concentration (mg/L)*	Average Total Dissolved Solids (mg/L)*	Total Nitrogen Generated (lb)**	Total Phosphorus Generated (lb)**	Total Potassium Generated (lb)**	Total Salt Generated (lb)**
21,080,698	417.75	44.30	508.75	4,710.00	73,357.82	7,779.18	89,337.63	827,086.42

* The average Total Kjeldahl Nitrogen, Total Phosphorus, Total Potassium, and Total Salt concentrations are based on an average of all process wastewater sample results for the year.

** The total pounds of Nitrogen, Phosphorus, Potassium and Total Dissolved Solids generated = Average Concentration (mg/L) X Total Gallons of Wastewater Generated X 8.33 X 0.000001.

*** The total gallons of process wastewater generated is calculated as the total gallons of process wastewater applied to all land application areas (Attachment B) plus the total gallons of process wastewater transferred offsite (Attachment C).



Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 1

Alfalfa, 39 Acres Planted on 11/15/2017

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00 Pounds	100.00		%		546						
02/12/2023	Ground Water: Well Avg	3.00 Acre Inches	10.40		mg/L		275	0	0	0	16,541		
03/07/2023	Ground Water: Well Avg	3.30 Acre Inches	10.40		mg/L		303	0	0	0	18,195		
04/17/2023	Ground Water: Well Avg	3.35 Acre Inches	10.40		mg/L		307	0	0	0	18,470		
05/08/2023	Ground Water: Well Avg	3.90 Acre Inches	10.40		mg/L		358	0	0	0	21,503		
06/15/2023	Ground Water: Well Avg	4.20 Acre Inches	10.40		mg/L		385	0	0	0	23,157		
07/23/2023	Ground Water: Well Avg	4.35 Acre Inches	10.40		mg/L		399	0	0	0	23,984		
08/12/2023	Ground Water: Well Avg	4.00 Acre Inches	10.40		mg/L		367	0	0	0	22,054		
09/09/2023	Ground Water: Well Avg	3.20 Acre Inches	10.40		mg/L		294	0	0	0	17,643		
10/03/2023	Harvest	9.00 Tons	52.50	2.73	0.27	2.23 %							9,103
Acre Inches Applied:		29.30	Totals:					3,234	0	0	161,546		9,103
Season Nitrogen Ratio:		0.36	Lbs Per Acre:					83	0	0	4,142		233

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 2

Alfalfa, 40 Acres Planted on 11/15/2017

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00 Pounds	100.00		%			560					
02/03/2023	Ground Water: Well Avg	3.80 Acre Inches	10.40		mg/L			358	0	0	0	21,488	
03/10/2023	Ground Water: Well Avg	3.30 Acre Inches	10.40		mg/L			310	0	0	0	18,661	
04/20/2023	Ground Water: Well Avg	3.35 Acre Inches	10.40		mg/L			315	0	0	0	18,944	
05/08/2023	Ground Water: Well Avg	4.00 Acre Inches	10.40		mg/L			376	0	0	0	22,620	
06/12/2023	Ground Water: Well Avg	4.20 Acre Inches	10.40		mg/L			395	0	0	0	23,750	
07/19/2023	Ground Water: Well Avg	3.90 Acre Inches	10.40		mg/L			367	0	0	0	22,054	
08/04/2023	Ground Water: Well Avg	4.70 Acre Inches	10.40		mg/L			442	0	0	0	26,578	
09/12/2023	Ground Water: Well Avg	3.00 Acre Inches	10.40		mg/L			282	0	0	0	16,965	
10/03/2023	Harvest	9.50 Tons	63.40	2.90	0.27	2.29	%						8,067
Acre Inches Applied:		30.25	Totals:						3,406	0	0	171,060	8,067
Season Nitrogen Ratio:		0.42	Lbs Per Acre:						85	0	0	4,277	202

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Nutrient Applications (Attachment B)

Field Name: 3

Wheat, 40 Acres Planted on 11/14/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
				% Moist.	Nitrogen	Phos.	Potass.	Units								
10/05/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	320		3,609	1,384	5,156	0		
10/10/2022	Ground Water: Well Avg	4.90	Acre Inches		11.43			mg/L			507	0	0	25,650		
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			560					
02/20/2023	Ground Water: Well Avg	5.30	Acre Inches		10.40			mg/L			499	0	0	29,971		
02/20/2023	Waste Water: Main Lagoon	0.46	Acre Inches		572.00	82.40	701.00	mg/L		499,639	2,381	343	2,918	20,227		
04/02/2023	Ground Water: Well Avg	5.25	Acre Inches		10.40			mg/L			494	0	0	29,688		
05/15/2023	Harvest	18.10	Tons	**	0.55	0.08	0.42	%							7,964	
Acre Inches Applied:		15.91							Totals:	320	499,639	8,050	1,727	8,074	105,536	7,964
Season Nitrogen Ratio:		1.01							Lbs Per Acre:			201	43	202	2,638	199

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 3

Corn, 40 Acres Planted on 06/03/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/25/2023	Ground Water: Well Avg	5.25	Acre Inches	10.40			mg/L			494	0	0	29,688	
06/25/2023	Waste Water: Main Lagoon	0.55	Acre Inches	380.00	46.10	592.00	mg/L		597,395	1,891	230	2,946	26,275	
07/19/2023	Ground Water: Well Avg	6.00	Acre Inches	10.40			mg/L			564	0	0	33,929	
07/30/2023	Ground Water: Well Avg	5.70	Acre Inches	10.40			mg/L			536	0	0	32,233	
07/30/2023	Waste Water: Main Lagoon	0.62	Acre Inches	368.00	17.40	324.00	mg/L		673,427	2,064	98	1,818	25,580	
08/21/2023	Ground Water: Well Avg	5.50	Acre Inches	10.40			mg/L			518	0	0	31,102	
09/07/2023	Ground Water: Well Avg	5.30	Acre Inches	10.40			mg/L			499	0	0	29,971	
09/20/2023	Ground Water: Well Avg	5.30	Acre Inches	10.40			mg/L			499	0	0	29,971	
10/13/2023	Harvest	28.90	Tons	58.20	1.22	0.28	1.33 %							11,790
Acre Inches Applied:		34.22		Totals:				1,270,821	7,065	327	4,764	238,748	11,790	
Season Nitrogen Ratio:		0.60		Lbs Per Acre:				177	8	119	5,969	295		

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Nutrient Applications (Attachment B)

Field Name: 4

Wheat, 38 Acres Planted on 11/12/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
10/01/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	304		3,429	1,315	4,898	0	
10/07/2022	Ground Water: Well Avg	4.50	Acre Inches		11.43			mg/L			442	0	0	22,379	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
02/25/2023	Ground Water: Well Avg	5.60	Acre Inches		10.40			mg/L			500	0	0	30,084	
02/25/2023	Waste Water: Main Lagoon	0.50	Acre Inches		572.00	82.40	701.00	mg/L		515,932	2,458	354	3,013	20,887	
04/19/2023	Ground Water: Well Avg	5.10	Acre Inches		10.40			mg/L			456	0	0	27,398	
05/15/2023	Harvest	17.25	Tons	**	0.55	0.08	0.42	%							7,210
Acre Inches Applied:		15.70		Totals:					304	515,932	7,817	1,669	7,911	100,748	7,210
Season Nitrogen Ratio:		1.08		Lbs Per Acre:							206	44	208	2,651	190

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Nutrient Applications (Attachment B)

Field Name: 4

Corn, 38 Acres Planted on 06/16/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/30/2023	Ground Water: Well Avg	5.00	Acre Inches	10.40		mg/L		447		0	0	26,861		
06/30/2023	Waste Water: Main Lagoon	0.55	Acre Inches	380.00	46.10	592.00	mg/L	567,525	1,796	218	2,799	24,961		
07/15/2023	Ground Water: Well Avg	6.00	Acre Inches	10.40		mg/L		536		0	0	32,233		
08/01/2023	Ground Water: Well Avg	5.50	Acre Inches	10.40		mg/L		492		0	0	29,547		
08/01/2023	Waste Water: Main Lagoon	0.60	Acre Inches	368.00	17.40	324.00	mg/L	619,118	1,898	90	1,671	23,517		
08/25/2023	Ground Water: Well Avg	5.50	Acre Inches	10.40		mg/L		492		0	0	29,547		
08/25/2023	Waste Water: Main Lagoon	0.60	Acre Inches	368.00	17.40	324.00	mg/L	619,118	1,898	90	1,671	23,517		
09/10/2023	Ground Water: Well Avg	5.10	Acre Inches	10.40		mg/L		456		0	0	27,398		
09/22/2023	Ground Water: Well Avg	5.00	Acre Inches	10.40		mg/L		447		0	0	26,861		
10/13/2023	Harvest	29.50	Tons	56.80	1.24	0.26	1.02 %							12,010
Acre Inches Applied:		33.85		Totals:				1,805,761	8,461	397	6,140	244,441	12,010	
Season Nitrogen Ratio:		0.70		Lbs Per Acre:				223	10	162	6,433	316		



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Nutrient Applications (Attachment B)

Field Name: 5

Pasture, 23 Acres Planted on 11/15/2021

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00 Pounds	100.00 %						322				
	Acre Inches Applied:	0.00	Totals:						322				
	Season Nitrogen Ratio:		Lbs Per Acre:						14				

Season Notes: Pasture was grazed and not harvested.

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Nutrient Applications (Attachment B)

Field Name: 6

Pasture, 17 Acres Planted on 11/15/2021

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00 Pounds	100.00	%					238				
	Acre Inches Applied:	0.00			Totals:				238				
	Season Nitrogen Ratio:			Lbs Per Acre:					14				

Season Notes: Pasture was grazed and not harvested.

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Nutrient Applications (Attachment B)

Field Name: 7

Alfalfa, 38 Acres Planted on 10/10/2019

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00		%		532						
02/14/2023	Ground Water: Well Avg	4.00	Acre Inches	10.40		mg/L		358		0	0	21,489		
03/10/2023	Ground Water: Well Avg	4.30	Acre Inches	10.40		mg/L		385		0	0	23,100		
04/17/2023	Ground Water: Well Avg	5.35	Acre Inches	10.40		mg/L		478		0	0	28,741		
05/11/2023	Ground Water: Well Avg	5.90	Acre Inches	10.40		mg/L		527		0	0	31,696		
06/15/2023	Ground Water: Well Avg	5.20	Acre Inches	10.40		mg/L		465		0	0	27,935		
07/24/2023	Ground Water: Well Avg	5.35	Acre Inches	10.40		mg/L		478		0	0	28,741		
08/14/2023	Ground Water: Well Avg	5.00	Acre Inches	10.40		mg/L		447		0	0	26,861		
09/10/2023	Ground Water: Well Avg	5.20	Acre Inches	10.40		mg/L		465		0	0	27,935		
10/03/2023	Harvest	11.50	Tons	**	2.80	0.33	2.49	%						24,472
Acre Inches Applied:		40.30		Totals:				4,135		0	0	216,497		24,472
Season Nitrogen Ratio:		0.17		Lbs Per Acre:				109		0	0	5,697		644



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Nutrient Applications (Attachment B)

Field Name: 8

Wheat, 38 Acres Planted on 11/05/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
10/05/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	304		3,429	1,315	4,898	0	
10/10/2022	Ground Water: Well Avg	5.00	Acre Inches		11.43			mg/L			491	0	0	24,865	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
02/05/2023	Ground Water: Well Avg	5.30	Acre Inches		10.40			mg/L			474	0	0	28,472	
02/05/2023	Waste Water: Main Lagoon	0.50	Acre Inches		572.00	82.40	701.00	mg/L		515,932	2,458	354	3,013	20,887	
03/31/2023	Ground Water: Well Avg	5.00	Acre Inches		10.40			mg/L			447	0	0	26,861	
05/15/2023	Harvest	18.50	Tons	**	0.55	0.08	0.42	%							7,733
Acre Inches Applied:		15.80		Totals:					304	515,932	7,831	1,669	7,911	101,085	7,733
Season Nitrogen Ratio:		1.01		Lbs Per Acre:							206	44	208	2,660	204

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 8

Corn, 38 Acres Planted on 06/17/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
07/01/2023	Ground Water: Well Avg	5.30	Acre Inches	10.40			mg/L	474		0	0	28,472		
07/01/2023	Waste Water: Main Lagoon	0.50	Acre Inches	380.00	46.10	592.00	mg/L	515,932	1,633	198	2,544	22,692		
07/20/2023	Ground Water: Well Avg	5.50	Acre Inches	10.40			mg/L	492		0	0	29,547		
08/02/2023	Ground Water: Well Avg	6.00	Acre Inches	10.40			mg/L	536		0	0	32,233		
08/02/2023	Waste Water: Main Lagoon	0.60	Acre Inches	368.00	17.40	324.00	mg/L	619,118	1,898	90	1,671	23,517		
08/17/2023	Ground Water: Well Avg	6.00	Acre Inches	10.40			mg/L	536		0	0	32,233		
08/17/2023	Waste Water: Main Lagoon	0.60	Acre Inches	368.00	17.40	324.00	mg/L	619,118	1,898	90	1,671	23,517		
09/05/2023	Ground Water: Well Avg	5.50	Acre Inches	10.40			mg/L	492		0	0	29,547		
09/18/2023	Ground Water: Well Avg	5.00	Acre Inches	10.40			mg/L	447		0	0	26,861		
10/13/2023	Harvest	28.00	Tons	64.20	1.33	0.24	1.19 %							10,132
Acre Inches Applied:		35.00		Totals:				1,754,168	8,405	377	5,886	248,618	10,132	
Season Nitrogen Ratio:		0.83		Lbs Per Acre:				221	10	155	6,543	267		

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 9

Pasture, 31 Acres Planted on 11/15/2021

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00 Pounds	100.00	%					434				
	Acre Inches Applied:	0.00			Totals:				434				
	Season Nitrogen Ratio:			Lbs Per Acre:					14				

Season Notes: Pasture was grazed and not harvested.

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 10

Wheat, 41 Acres Planted on 11/14/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
10/07/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	328		3,699	1,419	5,285	0	
10/18/2022	Ground Water: Well Avg	5.20	Acre Inches		11.43			mg/L			551	0	0	27,901	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			574				
02/19/2023	Ground Water: Well Avg	5.20	Acre Inches		10.40			mg/L			501	0	0	30,140	
02/19/2023	Waste Water: Main Lagoon	0.55	Acre Inches		572.00	82.40	701.00	mg/L		612,329	2,918	420	3,576	24,789	
05/05/2023	Harvest	18.70	Tons	68.30	1.61	0.34	1.60	%							7,826
Acre Inches Applied:		10.95		Totals:					328	612,329	8,243	1,839	8,861	82,831	7,826
Season Nitrogen Ratio:		1.05		Lbs Per Acre:							201	45	216	2,020	191

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 11

Wheat, 39 Acres Planted on 11/20/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
				% Moist.	Nitrogen	Phos.	Potass.	Units								
10/15/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	312		3,519	1,349	5,027	0		
10/23/2022	Ground Water: Well Avg	4.30	Acre Inches		11.43			mg/L			434	0	0	21,947		
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			546					
02/15/2023	Ground Water: Well Avg	4.90	Acre Inches		10.40			mg/L			450	0	0	27,016		
02/15/2023	Waste Water: Main Lagoon	0.50	Acre Inches		572.00	82.40	701.00	mg/L		529,509	2,523	363	3,092	21,436		
04/02/2023	Ground Water: Well Avg	5.20	Acre Inches		10.40			mg/L			477	0	0	28,670		
05/05/2023	Harvest	20.00	Tons	**	0.55	0.08	0.42	%							8,580	
Acre Inches Applied:		14.90							Totals:	312	529,509	7,948	1,713	8,119	99,069	8,580
Season Nitrogen Ratio:		0.93							Lbs Per Acre:			204	44	208	2,540	220

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 11

Corn, 39 Acres Planted on 06/11/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/28/2023	Ground Water: Well Avg	5.00	Acre Inches	10.40			mg/L			459	0	0	27,568	
06/28/2023	Waste Water: Main Lagoon	0.50	Acre Inches	380.00	46.10	592.00	mg/L		529,509	1,676	203	2,611	23,289	
07/12/2023	Ground Water: Well Avg	5.90	Acre Inches	10.40			mg/L			541	0	0	32,530	
07/26/2023	Ground Water: Well Avg	6.00	Acre Inches	10.40			mg/L			550	0	0	33,081	
07/26/2023	Waste Water: Main Lagoon	0.60	Acre Inches	368.00	17.40	324.00	mg/L		635,411	1,948	92	1,715	24,136	
08/15/2023	Ground Water: Well Avg	6.00	Acre Inches	10.40			mg/L			550	0	0	33,081	
09/01/2023	Ground Water: Well Avg	5.50	Acre Inches	10.40			mg/L			505	0	0	30,324	
09/13/2023	Ground Water: Well Avg	5.00	Acre Inches	10.40			mg/L			459	0	0	27,568	
10/13/2023	Harvest	28.00	Tons	65.30	1.35	0.26	1.23	%						10,231
Acre Inches Applied:		34.50		Totals:					1,164,919	6,688	295	4,326	231,577	10,231
Season Nitrogen Ratio:		0.65		Lbs Per Acre:					171	8	111	5,938		262

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 12

Wheat, 38 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/05/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	304		3,429	1,315	4,898	0	
10/12/2022	Ground Water: Well Avg	4.90	Acre Inches		11.43			mg/L			481	0	0	24,368	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
03/01/2023	Ground Water: Well Avg	5.30	Acre Inches		10.40			mg/L			474	0	0	28,472	
03/01/2023	Waste Water: Main Lagoon	0.46	Acre Inches		572.00	82.40	701.00	mg/L		474,657	2,262	326	2,772	19,216	
05/05/2023	Harvest	19.10	Tons	**	0.55	0.08	0.42	%						7,984	
Acre Inches Applied:		10.66		Totals:					304	474,657	7,178	1,640	7,670	72,056	7,984
Season Nitrogen Ratio:		0.90		Lbs Per Acre:							189	43	202	1,896	210

Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: 12

Corn, 38 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
07/02/2023	Ground Water: Well Avg	4.90	Acre Inches	10.40		mg/L		438		0	0	26,323		
07/02/2023	Waste Water: Main Lagoon	0.50	Acre Inches	380.00	46.10	592.00	mg/L	515,932	1,633	198	2,544	22,692		
07/20/2023	Ground Water: Well Avg	6.00	Acre Inches	10.40		mg/L		536		0	0	32,233		
08/02/2023	Ground Water: Well Avg	5.50	Acre Inches	10.40		mg/L		492		0	0	29,547		
08/02/2023	Waste Water: Main Lagoon	0.60	Acre Inches	368.00	17.40	324.00	mg/L	619,118	1,898	90	1,671	23,517		
08/28/2023	Ground Water: Well Avg	6.00	Acre Inches	10.40		mg/L		536		0	0	32,233		
09/12/2023	Ground Water: Well Avg	6.00	Acre Inches	10.40		mg/L		536		0	0	32,233		
09/29/2023	Ground Water: Well Avg	5.50	Acre Inches	10.40		mg/L		492		0	0	29,547		
10/13/2023	Harvest	28.20	Tons	66.10	1.29	0.29	1.06 %							9,372
Acre Inches Applied:		35.00		Totals:				1,135,050	6,561	288	4,215	228,325	9,372	
Season Nitrogen Ratio:		0.70		Lbs Per Acre:				173	8	111	6,009	247		

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 13

Wheat, 39 Acres Planted on 11/09/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
10/02/2022	Corral Solids: Main Corral	10.00	Tons	57.60	1.33	0.51	1.90	%	390		4,398	1,687	6,284	0	
10/15/2022	Ground Water: Well Avg	5.35	Acre Inches		11.43			mg/L			539	0	0	27,306	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			546				
02/23/2023	Ground Water: Well Avg	5.15	Acre Inches		10.40			mg/L			473	0	0	28,395	
02/23/2023	Waste Water: Main Lagoon	0.60	Acre Inches		572.00	82.40	701.00	mg/L		635,411	3,028	436	3,710	25,724	
05/05/2023	Harvest	18.10	Tons	70.20	1.69	0.34	1.67	%							7,110
Acre Inches Applied:		11.10		Totals:					390	635,411	8,984	2,123	9,994	81,425	7,110
Season Nitrogen Ratio:		1.26		Lbs Per Acre:							230	54	256	2,088	182

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 13

Corn, 39 Acres Planted on 06/08/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
				% Moist.	Nitrogen	Phos.	Potass.								
06/27/2023	Ground Water: Well Avg	5.20	Acre Inches		10.40			mg/L		477	0	0	28,670		
06/27/2023	Waste Water: Main Lagoon	0.57	Acre Inches		380.00	46.10	592.00	mg/L		603,640	1,911	232	2,977	26,550	
07/12/2023	Ground Water: Well Avg	6.10	Acre Inches		10.40			mg/L			560	0	0	33,632	
07/25/2023	Ground Water: Well Avg	5.50	Acre Inches		10.40			mg/L			505	0	0	30,324	
07/25/2023	Waste Water: Main Lagoon	0.60	Acre Inches		368.00	17.40	324.00	mg/L		635,411	1,948	92	1,715	24,136	
08/13/2023	Ground Water: Well Avg	6.00	Acre Inches		10.40			mg/L			550	0	0	33,081	
08/30/2023	Ground Water: Well Avg	5.70	Acre Inches		10.40			mg/L			523	0	0	31,427	
09/15/2023	Ground Water: Well Avg	5.50	Acre Inches		10.40			mg/L			505	0	0	30,324	
10/13/2023	Harvest	29.10	Tons		68.70	1.33	0.26	1.06	%					9,449	
Acre Inches Applied:		35.17							Totals:	1,239,051	6,977	324	4,692	238,145	9,449
Season Nitrogen Ratio:		0.74							Lbs Per Acre:		179	8	120	6,106	242

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 14

Wheat, 38 Acres Planted on 11/07/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/04/2022	Corral Solids: Main Corral	9.00	Tons	57.60	1.33	0.51	1.90	%	342		3,857	1,479	5,510	0	
10/14/2022	Ground Water: Well Avg	5.10	Acre Inches		11.43			mg/L			501	0	0	25,363	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
02/07/2023	Ground Water: Well Avg	5.50	Acre Inches		10.40			mg/L			492	0	0	29,547	
02/07/2023	Waste Water: Main Lagoon	0.59	Acre Inches		572.00	82.40	701.00	mg/L		608,799	2,901	418	3,555	24,646	
05/05/2023	Harvest	17.39	Tons	69.80	1.67	0.36	1.67	%							6,666
Acre Inches Applied:		11.19		Totals:					342	608,799	8,283	1,897	9,065	79,556	6,666
Season Nitrogen Ratio:		1.24		Lbs Per Acre:							218	50	239	2,094	175

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: 14

Corn, 38 Acres Planted on 06/03/2023

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
			% Moist.	Nitrogen	Phos.	Potass.	Units								
05/20/2023	Corral Solids: Main Corral	6.00 Tons	45.40	2.05	0.60	2.51	%	228		5,104	1,494	6,249	0		
06/01/2023	Ground Water: Well Avg	4.95 Acre Inches		10.40			mg/L			442	0	0	26,592		
06/25/2023	Ground Water: Well Avg	4.95 Acre Inches		10.40			mg/L			442	0	0	26,592		
06/25/2023	Waste Water: Main Lagoon	0.57 Acre Inches		380.00	46.10	592.00	mg/L		588,162	1,862	226	2,901	25,869		
07/09/2023	Ground Water: Well Avg	6.20 Acre Inches		10.40			mg/L			554	0	0	33,307		
07/24/2023	Ground Water: Well Avg	5.30 Acre Inches		10.40			mg/L			474	0	0	28,472		
07/24/2023	Waste Water: Main Lagoon	0.59 Acre Inches		368.00	17.40	324.00	mg/L		608,799	1,866	88	1,643	23,125		
08/10/2023	Ground Water: Well Avg	6.00 Acre Inches		10.40			mg/L			536	0	0	32,233		
08/29/2023	Ground Water: Well Avg	5.40 Acre Inches		10.40			mg/L			483	0	0	29,010		
09/05/2023	Ground Water: Well Avg	5.00 Acre Inches		10.40			mg/L			447	0	0	26,861		
10/13/2023	Harvest	28.00 Tons	68.00	1.31	0.30	0.88	%							8,920	
Acre Inches Applied:		38.96						Totals:	228	1,196,962	12,211	1,808	10,793	252,061	8,920
Season Nitrogen Ratio:		1.37						Lbs Per Acre:			321	48	284	6,633	235



Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: S-1

Wheat, 38 Acres Planted on 11/25/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
				% Moist.	Nitrogen	Phos.	Potass.	Units								
10/18/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	304		3,429	1,315	4,898	0		
10/26/2022	Ground Water: Well Avg	4.50	Acre Inches		11.43			mg/L			442	0	0	22,379		
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532					
02/28/2023	Ground Water: Well Avg	5.30	Acre Inches		10.40			mg/L			474	0	0	28,472		
02/28/2023	Waste Water: Main Lagoon	0.63	Acre Inches		572.00	82.40	701.00	mg/L		650,074	3,097	446	3,796	26,317		
05/15/2023	Harvest	18.32	Tons	**	0.55	0.08	0.42	%							7,658	
Acre Inches Applied:		10.43							Totals:	304	650,074	7,974	1,761	8,694	77,168	7,658
Season Nitrogen Ratio:		1.04							Lbs Per Acre:			210	46	229	2,031	202



Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: S-1

Corn, 38 Acres Planted on 06/21/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/26/2023	Ground Water: Well Avg	5.80	Acre Inches	10.40			mg/L			518	0	0	31,158	
06/26/2023	Waste Water: Main Lagoon	0.45	Acre Inches	380.00	46.10	592.00	mg/L		464,339	1,470	178	2,290	20,423	
07/10/2023	Fertilize - UN32	40.00	Gallons	32.00	0.00	0.00	%			4,052	0	0	0	
07/10/2023	Ground Water: Well Avg	5.20	Acre Inches	10.40			mg/L			465	0	0	27,935	
07/30/2023	Ground Water: Well Avg	5.15	Acre Inches	10.40			mg/L			461	0	0	27,667	
07/30/2023	Waste Water: Main Lagoon	0.50	Acre Inches	368.00	17.40	324.00	mg/L		515,932	1,582	75	1,392	19,598	
08/14/2023	Ground Water: Well Avg	5.20	Acre Inches	10.40			mg/L			465	0	0	27,935	
09/10/2023	Ground Water: Well Avg	5.00	Acre Inches	10.40			mg/L			447	0	0	26,861	
10/13/2023	Harvest	27.50	Tons	74.00	1.33	0.28	1.34	%						7,227
Acre Inches Applied:		27.30		Totals:				980,270	9,458	253	3,682	181,576	7,227	
Season Nitrogen Ratio:		1.31		Lbs Per Acre:				249	7	97	4,778	190		

Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: S-2

Wheat, 39 Acres Planted on 11/11/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/29/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	312		3,519	1,349	5,027	0	
10/04/2022	Ground Water: Well Avg	4.80	Acre Inches		11.43			mg/L			484	0	0	24,499	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			546				
03/05/2023	Ground Water: Well Avg	5.50	Acre Inches		10.40			mg/L			505	0	0	30,324	
03/05/2023	Waste Water: Main Lagoon	0.53	Acre Inches		572.00	82.40	701.00	mg/L		561,279	2,674	385	3,278	22,723	
05/05/2023	Harvest	18.80	Tons	**	0.55	0.08	0.42	%							8,065
Acre Inches Applied:		10.83		Totals:					312	561,279	7,728	1,735	8,305	77,546	8,065
Season Nitrogen Ratio:		0.96		Lbs Per Acre:							198	44	213	1,988	207

Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: S-2

Corn, 39 Acres Planted on 06/14/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
				% Moist.	Nitrogen	Phos.	Potass.								
05/20/2023	Corral Solids: Main Corral	6.00	Tons	45.40	2.05	0.60	2.51	%	234		5,238	1,533	6,414	0	
06/01/2023	Ground Water: Well Avg	4.50	Acre Inches		10.40			mg/L			413	0	0	24,811	
07/03/2023	Ground Water: Well Avg	5.00	Acre Inches		10.40			mg/L			459	0	0	27,568	
07/03/2023	Waste Water: Main Lagoon	0.50	Acre Inches		380.00	46.10	592.00	mg/L		529,509	1,676	203	2,611	23,289	
07/20/2023	Ground Water: Well Avg	5.30	Acre Inches		10.40			mg/L			486	0	0	29,222	
08/05/2023	Ground Water: Well Avg	5.00	Acre Inches		10.40			mg/L			459	0	0	27,568	
08/05/2023	Waste Water: Main Lagoon	0.50	Acre Inches		368.00	17.40	324.00	mg/L		529,509	1,623	77	1,429	20,113	
08/20/2023	Ground Water: Well Avg	5.20	Acre Inches		10.40			mg/L			477	0	0	28,670	
09/15/2023	Ground Water: Well Avg	4.70	Acre Inches		10.40			mg/L			431	0	0	25,914	
10/13/2023	Harvest	27.90	Tons	68.00	1.24	0.27	1.22	%						8,635	
Acre Inches Applied:		30.70		Totals:					234	1,059,018	11,263	1,813	10,454	207,154	8,635
Season Nitrogen Ratio:		1.30		Lbs Per Acre:						289	46	268	5,312	221	

Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: S-3

Wheat, 39 Acres Planted on 10/31/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
				% Moist.	Nitrogen	Phos.	Potass.	Units								
10/05/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	312		3,519	1,349	5,027	0		
10/10/2022	Ground Water: Well Avg	4.50	Acre Inches		11.43			mg/L			454	0	0	22,968		
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			546					
02/15/2023	Ground Water: Well Avg	5.00	Acre Inches		10.40			mg/L			459	0	0	27,568		
02/15/2023	Waste Water: Main Lagoon	0.49	Acre Inches		572.00	82.40	701.00	mg/L		518,919	2,473	356	3,030	21,008		
05/05/2023	Harvest	19.20	Tons	**	0.55	0.08	0.42	%							8,237	
Acre Inches Applied:		9.99							Totals:	312	518,919	7,450	1,705	8,057	71,543	8,237
Season Nitrogen Ratio:		0.90							Lbs Per Acre:			191	44	207	1,834	211

Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: S-3

Corn, 39 Acres Planted on 06/01/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
				% Moist.	Nitrogen	Phos.	Potass.								
05/18/2023	Corral Solids: Main Corral	5.00	Tons	45.40	2.05	0.60	2.51	%	195		4,365	1,278	5,345	0	
06/02/2023	Ground Water: Well Avg	5.00	Acre Inches		10.40			mg/L			459	0	0	27,568	
06/25/2023	Ground Water: Well Avg	5.00	Acre Inches		10.40			mg/L			459	0	0	27,568	
06/25/2023	Waste Water: Main Lagoon	0.45	Acre Inches		380.00	46.10	592.00	mg/L		476,558	1,509	183	2,350	20,960	
07/12/2023	Ground Water: Well Avg	5.20	Acre Inches		10.40			mg/L			477	0	0	28,670	
07/30/2023	Ground Water: Well Avg	5.45	Acre Inches		10.40			mg/L			500	0	0	30,049	
07/30/2023	Waste Water: Main Lagoon	0.45	Acre Inches		368.00	17.40	324.00	mg/L		476,558	1,461	69	1,286	18,102	
08/10/2023	Fertilize - UN32	30.00	Gallons		32.00	0.00	0.00	%			3,119	0	0	0	
08/10/2023	Ground Water: Well Avg	5.00	Acre Inches		10.40			mg/L			459	0	0	27,568	
09/01/2023	Ground Water: Well Avg	4.50	Acre Inches		10.40			mg/L			413	0	0	24,811	
10/13/2023	Harvest	30.20	Tons	62.20	1.12	0.25	1.20	%						9,973	
Acre Inches Applied:		31.05		Totals:					195	953,116	13,219	1,530	8,981	205,294	9,973
Season Nitrogen Ratio:		1.33		Lbs Per Acre:							339	39	230	5,264	256

Sun Valley 2023
Nutrient Applications (Attachment B)

Field Name: S-4

Wheat, 37 Acres Planted on 11/02/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
10/02/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	296		3,339	1,280	4,769	0	
10/08/2022	Ground Water: Well Avg	4.70	Acre Inches		11.43			mg/L			450	0	0	22,758	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			518				
02/19/2023	Ground Water: Well Avg	5.12	Acre Inches		10.40			mg/L			445	0	0	26,782	
02/19/2023	Waste Water: Main Lagoon	0.50	Acre Inches		572.00	82.40	701.00	mg/L		502,355	2,394	345	2,933	20,337	
05/05/2023	Harvest	17.90	Tons	**	0.55	0.08	0.42	%							7,285
Acre Inches Applied:		10.32		Totals:					296	502,355	7,145	1,625	7,703	69,877	7,285
Season Nitrogen Ratio:		0.98		Lbs Per Acre:							193	44	208	1,889	197

Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: S-4

Corn, 37 Acres Planted on 06/09/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)		
				%	Moist.	Nitrogen	Phos.									
05/20/2023	Corral Solids: Main Corral	5.00	Tons	45.40	2.05	0.60	2.51	%		185	4,141	1,212	5,071	0		
06/02/2023	Ground Water: Well Avg	5.00	Acre Inches		10.40			mg/L			435	0	0	26,154		
06/28/2023	Ground Water: Well Avg	5.00	Acre Inches		10.40			mg/L			435	0	0	26,154		
06/28/2023	Waste Water: Main Lagoon	0.45	Acre Inches		380.00	46.10	592.00	mg/L		452,119	1,431	174	2,230	19,885		
07/15/2023	Ground Water: Well Avg	5.20	Acre Inches		10.40			mg/L			453	0	0	27,200		
07/30/2023	Ground Water: Well Avg	5.45	Acre Inches		10.40			mg/L			474	0	0	28,508		
07/30/2023	Waste Water: Main Lagoon	0.45	Acre Inches		368.00	17.40	324.00	mg/L		452,119	1,386	65	1,220	17,174		
08/20/2023	Fertilize - UN32	30.00	Gallons		32.00	0.00	0.00	%			2,959	0	0	0		
08/20/2023	Ground Water: Well Avg	5.00	Acre Inches		10.40			mg/L			435	0	0	26,154		
09/12/2023	Ground Water: Well Avg	4.50	Acre Inches		10.40			mg/L			392	0	0	23,538		
10/13/2023	Harvest	28.10	Tons	63.10	1.26	0.34	1.21	%						9,668		
Acre Inches Applied:		31.05							Totals:	185	904,238	12,542	1,451	8,521	194,766	9,668
Season Nitrogen Ratio:		1.30							Lbs Per Acre:		339	39	230	5,264	261	

Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: S-5

Oats, 38 Acres Planted on 11/06/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
				% Moist.	Nitrogen	Phos.	Potass.								
10/06/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	304	3,429	1,315	4,898	0		
10/10/2022	Ground Water: Well Avg	5.00	Acre Inches		11.43			mg/L		491	0	0	24,865		
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%		532					
03/04/2023	Ground Water: Well Avg	5.20	Acre Inches		10.40			mg/L		465	0	0	27,935		
03/04/2023	Waste Water: Main Lagoon	0.50	Acre Inches		572.00	82.40	701.00	mg/L	515,932	2,458	354	3,013	20,887		
05/15/2023	Harvest	14.70	Tons	**	0.50	0.08	0.42	%						5,586	
Acre Inches Applied:		10.70		Totals:					304	515,932	7,375	1,669	7,911	73,687	5,586
Season Nitrogen Ratio:		1.32		Lbs Per Acre:						194	44	208	1,939		147

Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: S-6

Alfalfa, 38 Acres Planted on 11/20/2019

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
				% Moist.	Nitrogen	Phos.	Potass.							
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00		%			532				
02/12/2023	Ground Water: Well Avg	3.00	Acre Inches		10.40		mg/L			268	0	0	16,117	
03/07/2023	Ground Water: Well Avg	3.30	Acre Inches		10.40		mg/L			295	0	0	17,728	
04/17/2023	Ground Water: Well Avg	3.35	Acre Inches		10.40		mg/L			299	0	0	17,997	
05/08/2023	Ground Water: Well Avg	3.90	Acre Inches		10.40		mg/L			348	0	0	20,951	
06/15/2023	Ground Water: Well Avg	4.20	Acre Inches		10.40		mg/L			375	0	0	22,563	
07/23/2023	Ground Water: Well Avg	4.35	Acre Inches		10.40		mg/L			389	0	0	23,369	
08/12/2023	Ground Water: Well Avg	4.00	Acre Inches		10.40		mg/L			358	0	0	21,489	
09/09/2023	Ground Water: Well Avg	3.20	Acre Inches		10.40		mg/L			286	0	0	17,191	
10/03/2023	Harvest	9.30	Tons	53.10	3.40	0.37	2.32	%						11,271
Acre Inches Applied:		29.30						Totals:		3,151	0	0	157,404	11,271
Season Nitrogen Ratio:		0.28						Lbs Per Acre:		83	0	0	4,142	297

Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: S-7

Alfalfa, 37 Acres Planted on 11/17/2019

Date	Event/Source	Amount Applied/Yield (per Acre)	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
			Units	% Moist.	Nitrogen	Phos.	Potass.	Units						
01/01/2023	Atmospheric Deposit	14.00 Pounds			100.00			%		518				
02/12/2023	Ground Water: Well Avg	3.00 Acre Inches			10.40			mg/L		261	0	0	15,692	
03/07/2023	Ground Water: Well Avg	3.30 Acre Inches			10.40			mg/L		287	0	0	17,262	
04/17/2023	Ground Water: Well Avg	3.35 Acre Inches			10.40			mg/L		292	0	0	17,523	
05/08/2023	Ground Water: Well Avg	3.90 Acre Inches			10.40			mg/L		339	0	0	20,400	
06/15/2023	Ground Water: Well Avg	4.20 Acre Inches			10.40			mg/L		366	0	0	21,969	
07/23/2023	Ground Water: Well Avg	4.35 Acre Inches			10.40			mg/L		379	0	0	22,754	
08/12/2023	Ground Water: Well Avg	4.00 Acre Inches			10.40			mg/L		348	0	0	20,923	
09/09/2023	Ground Water: Well Avg	3.20 Acre Inches			10.40			mg/L		279	0	0	16,738	
10/03/2023	Harvest	9.35 Tons		47.00	3.49	0.36	2.50	%					12,798	
Acre Inches Applied:		29.30						Totals:		3,068	0	0	153,262	12,798
Season Nitrogen Ratio:		0.24						Lbs Per Acre:		83	0	0	4,142	346

Sun Valley 2023

Nutrient Applications (Attachment B)

Field Name: S-8

Oats, 39 Acres Planted on 11/10/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
				% Moist.	Nitrogen	Phos.	Potass.								
10/07/2022	Corral Solids: Main Corral	8.00	Tons	57.60	1.33	0.51	1.90	%	312	3,519	1,349	5,027	0		
10/12/2022	Ground Water: Well Avg	4.70	Acre Inches		11.43			mg/L		474	0	0	23,989		
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%		546					
03/03/2023	Ground Water: Well Avg	4.90	Acre Inches		10.40			mg/L		450	0	0	27,016		
03/03/2023	Waste Water: Main Lagoon	0.45	Acre Inches		572.00	82.40	701.00	mg/L	476,558	2,271	327	2,783	19,293		
05/15/2023	Harvest	15.10	Tons	**	0.50	0.08	0.42	%						5,889	
Acre Inches Applied:		10.05		Totals:					312	476,558	7,259	1,677	7,810	70,298	5,889
Season Nitrogen Ratio:		1.23		Lbs Per Acre:						186	43	200	1,802	151	

Sun Valley 2023

Nutrient Applications (Attachment B)

Summary of Nutrient Applications, Removal, and Balance

	<u>Total N (Lbs)</u>	<u>Total P (Lbs)</u>	<u>Total K (Lbs)</u>	<u>Total Salts (Lbs)</u>	<u>Total Manure Applied</u>
Solid Manure	68,971.84	24,736.74	94,682.88	0.00	5,286.00 tons
Process Wastewater	78,148.43	8,574.80	93,854.31	854,811.12	21,080,697.72 gallons
Irrigation Water	61,482.02				
Fertilizer / Total Imports	10,129.28				
Atmospheric Deposition	11,256.00				
Total Nitrogen Applied	229,987.57				
Crop Nitrogen Removal	276,911.86				
Nitrogen Balance	(46,924.29)				
Nitrogen Ratio	0.83				

- ▣ Nutrient applications shown in Attachment B are on a crop year basis.
 - ▣ Lab sample data results for applications are based on the sample taken closest to the application date. Lab sample data results are shown on 100% dry basis for manure applications and harvest events.
 - ▣ Well Avg: Irrigation source representing the average nutrient values of all irrigation wells sampled for the facility during the reporting year.
- ** Book Value: No sample data results were available. For manure applications and plant tissue harvests, the calculations were based off book values.

Sun Valley 2023 Nutrient Applications (Attachment B)

FIELD NITROGEN RATIO Calculation:

"Field Nitrogen Ratio" = "Total Nitrogen Applied to Field" / "Total Nitrogen Extracted from Field at Harvest"

ATMOSPHERIC DEPOSITION (lbs) Calculation:

"Nitrogen Applied (Lbs)" = "14 Lbs (per year) * "Acres Planted"

HARVEST Nitrogen Extraction (Lbs) Calculation:

"Nitrogen Extracted (Lbs)" = ("Yield" (tons per acre) * 2000) * ((100 - "% Moisture") / 100 * "Lab Sample Data Nitrogen Value" / 100) * "Acres Planted"

IRRIGATION Nitrogen and Salts Applied (Lbs) Calculations:

"Nitrogen Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data Nitrogen Value" * 0.000001) * "Acres Planted"

"Salts Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data TDS Value" * 0.000001) * "Acres Planted"

PROCESS WASTEWATER Nitrogen, Phosphorus, Potassium and Salts Applied (Lbs) Calculations:

Nitrogen Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data Nitrogen Value" * 0.000001) * "Acres Planted"

Phosphorus Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data Phosphorus Value" * 0.000001) * "Acres Planted"

Potassium Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data Potassium Value" * 0.000001) * "Acres Planted"

Salt Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ("Lab Sample Data TDS Value" * 0.000001) * "Acres Planted"

SOLID MANURE (Corral, Separator, or Compost) Nitrogen, Phosphorus, Potassium and Salts Applied (Lbs) Calculations:

Nitrogen Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ((100 - "% Moisture")/100 * "Lab Sample Data Nitrogen Value"/100) * "Acres Planted"

Phosphorus Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ((100 - "% Moisture")/100 * "Lab Sample Data Phosphorus Value"/100) * "Acres Planted"

Potassium Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ((100 - "% Moisture")/100 * "Lab Sample Data Potassium Value"/100) * "Acres Planted"

Salt Applied (Lbs)" = "Lbs Applied per Acre" (see below) * ((100 - "% Moisture")/100 * "Lab Sample Data Ash Value"/100) * "Acres Planted"

"Lbs Applied per Acre" Calculations:

If "Application Units" = Tons, Then "Lbs Applied per Acre" = "Application Amount" (per Acre) * 2000

If "Application Units" = Acres Inches, Then "Lbs Applied per Acre" = "Application Amount" (per Acre) * 8.33 *27,154.3

If "Application Units" = Acre Feet, Then Lbs Applied per Acre" = "Application Amount" (per Acre) * 8.33 * 325,851

If "Application Units" = Gallons, Then "Lbs Applied per Acre" = "Application Amount" (per Acre) * 8.33

Sun Valley 2023

Estimated Manure and Process Wastewater/Nutrients Transferred Off-Site (Attachment C)

A. ESTIMATED TOTAL MANURE TRANSFERRED OFFSITE

Total Manure Exported (tons)*	Total Nitrogen Exported (lbs)**	Total Phosphorus Exported (lbs)**	Total Potassium Exported (lbs)**	Total Salts Exported (lbs)**

* The Total Manure (tons) should be calculated as the sum of all manure transferred offsite as reported in all the Manure/Process Wastewater Tracking Manifests for the reporting period.

** Total (N, P, K, Salts) (lbs) = Sum of (N, P, K, Salts) for each manure export event based on (Manure(tons) x 2000lb/ton) x ((100-moisture%)/100) x (N, P, K, and Ash) Concentration (%, dry weight) / 100 using the samples closest in date to the export event.

B. ESTIMATED TOTAL PROCESS WASTEWATER TRANSFERRED OFFSITE

Total Process Wastewater Exported (gal)*	Total Nitrogen Exported (lbs)**	Total Phosphorus Exported (lbs)**	Total Potassium Exported (lbs)**	Total TDS Exported (lbs)**

* The Total Manure (gals) should be calculated as the sum of all manure transferred offsite as reported in all the Manure/Process Wastewater Tracking Manifests for the reporting period.

** Total (Nitrogen, Phosphorus, Potassium, TDS) (lbs) = Sum of (Nitrogen, Phosphorus, Potassium, TDS) for each wastewater export event based on (Process Wastewater(gals) x 8.33lb/gal) x (NO₃-N or TKN, P, K, TDS) x 10-6 using the samples closest in date to the export event.

Sun Valley 2023
Land Application Area Description Technical Report (Attachment D)

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
1	x336 x150 x005 xxxx, x336 x150 x006 xxxx	39	None
2	x336 x150 x004 xxxx	40	None
3	x336 x150 x012 xxxx	40	Both
4	x336 x150 x012 xxxx	38	Both
5	x336 x150 x012 xxxx	23	None
6	x336 x150 x012 xxxx	17	None
7	x336 x150 x012 xxxx	38	None
8	x336 x150 x012 xxxx	38	Both
9	x336 x150 x012 xxxx, x336 x150 x013 xxxx	31	None
10	x336 x150 x012 xxxx, x336 x150 x013 xxxx	41	Both
11	x336 x150 x008 xxxx	39	Both
12	x336 x150 x008 xxxx	38	Both
13	x336 x150 x008 xxxx	39	Both
14	x336 x150 x008 xxxx	38	Both
S-1	x336 x170 x020 xxxx	38	Both
S-2	x336 x170 x020 xxxx	39	Both
S-3	x336 x160 x015 xxxx	39	Both
S-4	x336 x160 x015 xxxx	37	Both
S-5	x336 x170 x013 xxxx, x336 x170 x015 xxxx, x336 x170 x017 xxxx, x336 x170 x019 xxxx, x336 x170 x020 xxxx, x336 x170 x035 xxxx	38	Both
S-6	x336 x170 x020 xxxx	38	None
S-7	x336 x160 x015 xxxx	37	None
S-8	x336 x160 x015 xxxx	39	Both
			804

Production Area APN(s): x336 x150 x011 xxxx, x336 x150 x012 xxxx, x336 x150 x013 xxxx

Sun Valley 2023 Lab Results Summary (Attachment E)

Process Wastewater

(mg/l/ppm unless noted otherwise)

Sample Date:	TKN	TP	TK	EC (umhos/cm)	NH4N	NO3N	TDS	pH (units)	General Minerals					
									CA	MG	NA	HCO3	CO3	SO4
03/28/2023	572.00	82.40	701.00	7,320	273.00		4,860.00							
06/14/2023	380.00	46.10	592.00	7,950	371.00	0.01	5,280.00	7.66						
08/04/2023	368.00	17.40	324.00	6,860	357.00		4,560.00							
11/07/2023	351.00	31.30	418.00	6,230	346.00		4,140.00							
Averages:	417.75	44.30	508.75	7,090	336.75	0.01	4,710.00	7.66						

Manure - Corral Solids

(Dry Weight Basis)

Sample Date:	TN	TP	TK	Moisture	Ash	CA	MG	NA	S	CL
06/14/2023	2.05	0.60	2.51	45.40						%
11/07/2023	1.97	0.65	2.09	23.10						%
Averages:	2.01	0.63	2.30	34.25						

Plant Tissue

(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
1	1	Alfalfa	04/13/2023	54.60	5.40	44.60	52.50	21.30
2	1	Alfalfa	04/13/2023	58.00	5.40	45.80	63.40	17.60



Sun Valley 2023 Lab Results Summary (Attachment E)

Plant Tissue

(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
3	1	Wheat		11.00	1.70	8.30		BV-C
3	2	Corn	10/13/2023	24.40	5.60	26.60	58.20	6.04
4	1	Wheat		11.00	1.70	8.30		BV-C
4	2	Corn	10/13/2023	24.80	5.20	20.40	56.80	5.22
5	1	Pasture		30.60	3.40	16.80		BV-H
6	1	Pasture		30.60	3.40	16.80		BV-H
7	1	Alfalfa		56.00	6.60	49.80		BV-W
8	1	Wheat		11.00	1.70	8.30		BV-C
8	2	Corn	10/13/2023	26.60	4.80	23.80	64.20	6.10
9	1	Pasture		30.60	3.40	16.80		BV-H
10	1	Wheat	05/05/2023	32.20	6.80	32.00	68.30	10.20
11	1	Wheat		11.00	1.70	8.30		BV-C
11	2	Corn	10/13/2023	27.00	5.20	24.60	65.30	6.89
12	1	Wheat		11.00	1.70	8.30		BV-C
12	2	Corn	10/13/2023	25.80	5.80	21.20	66.10	6.87
13	1	Wheat	05/05/2023	33.80	6.80	33.40	70.20	11.50
13	2	Corn	10/13/2023	26.60	5.20	21.20	68.70	5.86
14	1	Wheat	05/05/2023	33.40	7.20	33.40	69.80	11.20

Sun Valley 2023 Lab Results Summary (Attachment E)

Plant Tissue

(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
14	2	Corn	10/13/2023	26.20	6.00	17.60	68.00	5.89
S-1	1	Wheat		11.00	1.70	8.30		BV-C
S-1	2	Corn	10/13/2023	26.60	5.60	26.80	74.00	6.34
S-2	1	Wheat		11.00	1.70	8.30		BV-C
S-2	2	Corn	10/13/2023	24.80	5.40	24.40	68.00	6.92
S-3	1	Wheat		11.00	1.70	8.30		BV-C
S-3	2	Corn	10/13/2023	22.40	5.00	24.00	62.20	5.46
S-4	1	Wheat		11.00	1.70	8.30		BV-C
S-4	2	Corn	10/13/2023	25.20	6.80	24.20	63.10	6.20
S-5	1	Oats		10.00	1.60	8.40	0.00	BV-C
S-6	1	Alfalfa	04/13/2023	68.00	7.40	46.40	53.10	15.50
S-7	1	Alfalfa	04/13/2023	69.80	7.20	50.00	47.00	12.90
S-8	1	Oats		10.00	1.60	8.40	0.00	BV-C

BV-C: Book Value from Central Valley Regional Water Quality Control Board Website table prepared by Roland D. Meyer, UC Davis (As Received basis)

BV-H: Book Value from CCA Experience / Actual History (As Received basis)

BV-W: Book Value from Western Fertilizer Handbook, 9th Edition, Table 4-1 (As Received basis)

Well / Irrigation Water

(mg/l/ppm unless noted otherwise)

Sample Date:	NO3N	TP (umhos/cm)	EC (umhos/cm)	NH4N *	TDS	TN	General Minerals					
							CA	MG	NA	HCO3	CO3	SO4



INNOVATIVE AG SERVICES

**Sun Valley 2023
Lab Results Summary (Attachment E)**

Well / Irrigation Water

(mg/l/ppm unless noted otherwise)

	Sample Date:	NO3N	TP (umhos/cm)	EC (umhos/cm)	NH4N *	TDS	TN	CA	MG	NA	HCO3	CO3	SO4	CL	General Minerals
Dairy															
1D	Out of Service							Out of service							
2D	12/06/2023	15.70			1,140										
3D	12/06/2023	21.10			1,090										
4D	09/07/2023	22.90			1,110										
Averages:		19.90			1,113										
Irrigation															
#1 IR	Out of Service							Out of service							
#2 IR	09/07/2023	19.10			1,100		910.00	19.10							
#3 IR	09/07/2023	16.80			917		840.00	16.80							
#4 IR	09/07/2023	10.00			746		590.00	10.00							
#5 IR	09/07/2023	2.30			308		210.00	2.30							
#6 IR	09/07/2023	12.80			1,070		960.00	12.80							
IW-S2	09/07/2023	1.40			362		240.00	1.40							
IW-S5								Did not Run							
Averages:		10.40			750		625.00	10.40							

* NH4N was non-detectable unless a value is shown

Sun Valley 2023 Lab Results Summary (Attachment E)

Soils

Field	Sample Date:	PO4P (ppm)
3	02/08/2023	30.50
4	02/08/2023	26.90
8	02/08/2023	11.60
10	02/08/2023	14.40
11	02/08/2023	8.90
12	02/08/2023	19.60
13	02/08/2023	28.80
14	02/08/2023	18.70
S-1	02/08/2023	22.80
S-2	02/08/2023	11.40
S-3	02/08/2023	23.70
S-4	02/08/2023	15.00
S-5	02/08/2023	28.50
S-8	02/08/2023	40.40

Sun Valley 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: 1	1	Alfalfa	39	11/15/2017	10/03/2023	8.8	351.0	9.0
Field: 2	1	Alfalfa	40	11/15/2017	10/03/2023	9.0	380.0	9.5
Field: 3	1	Wheat	40	11/14/2022	05/15/2023	19.0	724.0	18.1
	2	Corn	40	06/03/2023	10/13/2023	30.0	1156.0	28.9
Field: 4	1	Wheat	38	11/12/2022	05/15/2023	21.0	655.5	17.2
	2	Corn	38	06/16/2023	10/13/2023	28.9	1121.0	29.5
Field: 7	1	Alfalfa	38	10/10/2019	10/03/2023	11.0	437.0	11.5
Field: 8	1	Wheat	38	11/05/2022	05/15/2023	21.1	703.0	18.5
	2	Corn	38	06/17/2023	10/13/2023	29.8	1064.0	28.0
Field: 10	1	Wheat	41	11/14/2022	05/05/2023	19.1	766.7	18.7
Field: 11	1	Wheat	39	11/20/2022	05/05/2023	20.0	780.0	20.0
	2	Corn	39	06/11/2023	10/13/2023	29.6	1092.0	28.0
Field: 12	1	Wheat	38	11/01/2022	05/05/2023	20.3	725.8	19.1
	2	Corn	38	06/15/2023	10/13/2023	30.0	1071.6	28.2
Field: 13	1	Wheat	39	11/09/2022	05/05/2023	19.6	705.9	18.1
	2	Corn	39	06/08/2023	10/13/2023	29.2	1134.9	29.1



Sun Valley 2023
Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: 14								
	1	Wheat	38	11/07/2022	05/05/2023	19.4	660.8	17.4
	2	Corn	38	06/03/2023	10/13/2023	29.4	1064.0	28.0
Field: S-1								
	1	Wheat	38	11/25/2022	05/15/2023	19.6	696.2	18.3
	2	Corn	38	06/21/2023	10/13/2023	29.8	1045.0	27.5
Field: S-2								
	1	Wheat	39	11/11/2022	05/05/2023	19.6	733.2	18.8
	2	Corn	39	06/14/2023	10/13/2023	28.9	1088.1	27.9
Field: S-3								
	1	Wheat	39	10/31/2022	05/05/2023	19.6	748.8	19.2
	2	Corn	39	06/01/2023	10/13/2023	29.7	1177.8	30.2
Field: S-4								
	1	Wheat	37	11/02/2022	05/05/2023	19.6	662.3	17.9
	2	Corn	37	06/09/2023	10/13/2023	27.3	1039.7	28.1
Field: S-5								
	1	Oats	38	11/06/2022	05/15/2023	15.2	558.6	14.7
Field: S-6								
	1	Alfalfa	38	11/20/2019	10/03/2023	9.1	353.4	9.3
Field: S-7								
	1	Alfalfa	37	11/17/2019	10/03/2023	9.1	346.0	9.4
Field: S-8								
	1	Oats	39	11/10/2022	05/15/2023	15.5	588.9	15.1

Sun Valley 2023

Weather Data (Attachment G)

Day	January	February	March	April	May	June	July	August	September	October	November	December
1	Light	None	Light	None	None	None	None	None	None	None	None	None
2	Light	None	None	None	None	None	None	None	None	None	None	None
3	None	None	None	None	None	None	None	None	None	None	None	None
4	Light	None	None	None	Light	None	None	None	None	None	None	None
5	Heavy	Light	Light	None	None	None	None	None	None	None	None	None
6	None	None	None	None	None	None	None	None	None	None	None	None
7	None	None	None	None	None	SWP	None	None	None	None	None	None
8	None	None	None	None	None	None	None	None	None	None	None	None
9	SWP	None	Light	None	None	None	None	None	None	None	None	None
10	Light	None	SWP	None	None	None	None	None	None	None	None	None
11	None	None	None	None	None	None	None	None	None	None	None	None
12	None	None	None	None	None	None	None	None	None	None	None	None
13	None	None	None	None	None	None	None	None	None	None	None	None
14	Heavy	None	SWP	None	None	None	None	None	None	None	None	None
15	Light	None	Heavy	None	None	None	None	None	None	None	None	None
16	Heavy	None	None	None	None	None	None	None	None	None	None	None
17	None	None	None	None	None	None	None	None	None	None	None	None
18	None	None	None	None	None	None	None	None	None	None	None	None
19	None	None	Light	None	None	None	None	Light	None	None	None	None
20	None	None	None	None	None	None	None	SWP	None	None	None	None
21	None	None	SWP	None	None	None	None	None	None	None	None	None
22	None	Light	Light	None	None	None	None	None	None	None	None	None
23	None	None	None	None	None	None	None	None	None	Heavy	None	None
24	None	SWP	None	None	None	None	None	None	None	None	None	None
25	None	SWP	None	None	None	None	None	None	None	None	None	None
26	None	None	None	None	None	None	None	None	None	None	None	None
27	None	Light	None	None	None	None	None	None	None	None	None	None
28	None	Heavy	Light	None	None	None	None	None	None	None	None	None
29	Light		Heavy	None	None	None	None	None	None	None	None	None
30	None		Light	None	None	None	None	None	None	None	None	Light
31	None		None		None		None	None		None		None

*Note: SWP = Standing Water Present



September 29, 2023

Lab No. : VI 2346087

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Customer No. : 4018573
Reference : 41320

Laboratory Report

Introduction: This report package contains a total of 11 pages divided into 3 sections:

- | | | |
|-----------------|-----------|---|
| Case Narrative | (2 pages) | : An overview of the work performed at FGL. |
| Sample Results | (7 pages) | : Results for each sample submitted. |
| Quality Control | (2 pages) | : Supporting Quality Control (QC) results. |

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
#2 1R	09/07/2023	09/07/2023	VI 2346087-001	AGW
#3 1R	09/07/2023	09/07/2023	VI 2346087-002	AGW
#4 1R	09/07/2023	09/07/2023	VI 2346087-003	AGW
#5 1R	09/07/2023	09/07/2023	VI 2346087-004	AGW
IW-S2	09/07/2023	09/07/2023	VI 2346087-005	AGW
#6 1R	09/07/2023	09/07/2023	VI 2346087-006	AGW
4D	09/07/2023	09/07/2023	VI 2346087-007	DW

Sampling and Receipt Information:

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

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

Test Summary

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

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

KD: EHB

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

Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-09-29

Section: Case Narrative

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Page 1 of 10

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September 29, 2023

Innovative Ag Services, LLC
 1201 Delta View Road
 Suite 5
 Hanford, CA 93230

Description : #2 1R
 Project : Sun Valley

Lab No. : VI 2346087-001
 Customer No. : 4018573
 Reference : 41320
 Sampled On : September 7, 2023 at 11:30
 Sampled By : Zeke
 Received On : September 7, 2023 at 15:49
 Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	09/19/2023	12:49	sta	EPA 351.2	09/22/2023	20:42	lcr
Nitrate Nitrogen	19.1	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	13:46	lfs
Nitrogen, Total as Nitrogen	19.1	0.5	mg/L		1		09/19/2023	12:49	sta	Calc.	09/22/2023	20:42	lcr
Nitrate + Nitrite as N	19.1	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	13:46	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	09/19/2023	12:49	sta	EPA 351.2	09/22/2023	20:42	lcr
Conductivity	1100	1	umhos/cm		1		09/14/2023	09:03	krh	SM 4500-H+B	09/14/2023	10:34	krh
Solids, Total Dissolved (TDS)	910	20	mg/L		1		09/11/2023	12:45	ctl	SM 2540 C	09/12/2023	11:00	ctl

DQF Flags Definition:

U Constituent results were non-detect.

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



September 29, 2023

Innovative Ag Services, LLC
 1201 Delta View Road
 Suite 5
 Hanford, CA 93230

Description : #3 1R
 Project : Sun Valley

Lab No. : VI 2346087-002
 Customer No. : 4018573
 Reference : 41320
 Sampled On : September 7, 2023 at 11:05
 Sampled By : Zeke
 Received On : September 7, 2023 at 15:49
 Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis				
							Date	Time	Who	Method	Date	Time	Who	
Dairy Analysis														
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	09/19/2023	12:49	sta	EPA 351.2	09/22/2023	20:45	lcr	
Nitrate Nitrogen	16.8	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	13:48	lfs	
Nitrogen, Total as Nitrogen	16.8	0.5	mg/L		1		09/19/2023	12:49	sta	Calc.	09/22/2023	20:45	lcr	
Nitrate + Nitrite as N	16.8	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	13:48	lfs	
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	09/19/2023	12:49	sta	EPA 351.2	09/22/2023	20:45	lcr	
Conductivity	917	1	umhos/cm		1		09/14/2023	09:03	krh	SM 4500-H+B	09/14/2023	10:52	krh	
Solids, Total Dissolved (TDS)	840	20	mg/L		1		09/11/2023	12:45	ctl	SM 2540 C	09/12/2023	11:00	ctl	

DQF Flags Definition:

U Constituent results were non-detect.

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



September 29, 2023

Innovative Ag Services, LLC
 1201 Delta View Road
 Suite 5
 Hanford, CA 93230

Description : #4 1R
 Project : Sun Valley

Lab No. : VI 2346087-003
 Customer No. : 4018573
 Reference : 41320
 Sampled On : September 7, 2023 at 11:00
 Sampled By : Zeke
 Received On : September 7, 2023 at 15:49
 Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	09/19/2023	12:49	sta	EPA 351.2	09/22/2023	20:47	lcr
Nitrate Nitrogen	10	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	13:51	lfs
Nitrogen, Total as Nitrogen	10	0.5	mg/L		1		09/19/2023	12:49	sta	Calc.	09/22/2023	20:47	lcr
Nitrate + Nitrite as N	10	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	13:51	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	09/19/2023	12:49	sta	EPA 351.2	09/22/2023	20:47	lcr
Conductivity	746	1	umhos/cm		1		09/14/2023	09:03	krh	SM 4500-H+B	09/14/2023	12:36	krh
Solids, Total Dissolved (TDS)	590	20	mg/L		1		09/12/2023	10:30	ctl	SM 2540 C	09/13/2023	11:00	ctl

DQF Flags Definition:

U Constituent results were non-detect.

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

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September 29, 2023

Innovative Ag Services, LLC
 1201 Delta View Road
 Suite 5
 Hanford, CA 93230

Description : #5 1R
 Project : Sun Valley

Lab No. : VI 2346087-004
 Customer No.: 4018573
 Reference : 41320
 Sampled On : September 7, 2023 at 11:20
 Sampled By : Zeke
 Received On : September 7, 2023 at 15:49
 Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U1	09/19/2023	12:49	sta	EPA 351.2	09/20/2023	16:59	lcr
Nitrate Nitrogen	2.3	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	13:53	lfs
Nitrogen, Total as Nitrogen	2.3	0.5	mg/L		1	1	09/19/2023	12:49	sta	Calc.	09/20/2023	16:59	lcr
Nitrate + Nitrite as N	2.3	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	13:53	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	09/19/2023	12:49	sta	EPA 351.2	09/20/2023	16:59	lcr
Conductivity	308	1	umhos/cm		1		09/14/2023	09:03	krh	SM 4500-H+B	09/14/2023	12:22	krh
Solids, Total Dissolved (TDS)	210	20	mg/L		1		09/12/2023	10:30	ctl	SM 2540 C	09/13/2023	11:00	ctl

DQF Flags Definition:

U Constituent results were non-detect.

l The MS/MSD did not meet QC criteria.

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

Corporate Offices & Laboratory

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

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563 E. Linda Avenue
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 CA ELAP Certification No. 2670

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 CA ELAP Certification No. 2775

Office & Laboratory

9415 W. Goshen Avenue
 Visalia, CA 93291
 TEL: (559)734-8473
 FAX: (559)734-8435
 CA ELAP Certification No. 2810



September 29, 2023

Innovative Ag Services, LLC
 1201 Delta View Road
 Suite 5
 Hanford, CA 93230

Description : IW-S2
 Project : Sun Valley

Lab No. : VI 2346087-005
 Customer No. : 4018573
 Reference : 41320
 Sampled On : September 7, 2023 at 11:10
 Sampled By : Zeke
 Received On : September 7, 2023 at 15:49
 Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis				
							Date	Time	Who	Method	Date	Time	Who	
Dairy Analysis														
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U1	09/19/2023	12:49	sta	EPA 351.2	09/20/2023	17:02	lcr	
Nitrate Nitrogen	1.4	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	14:06	lfs	
Nitrogen, Total as Nitrogen	1.4	0.5	mg/L		1	I	09/19/2023	12:49	sta	Calc.	09/20/2023	17:02	lcr	
Nitrate + Nitrite as N	1.4	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	14:06	lfs	
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	09/19/2023	12:49	sta	EPA 351.2	09/20/2023	17:02	lcr	
Conductivity	362	1	umhos/cm		1		09/14/2023	09:03	krh	SM 4500-H+B	09/14/2023	12:19	krh	
Solids, Total Dissolved (TDS)	240	20	mg/L		1		09/12/2023	10:30	ctl	SM 2540 C	09/13/2023	11:00	ctl	

DQF Flags Definition:

- U Constituent results were non-detect.
- I The MS/MSD did not meet QC criteria.

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

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September 29, 2023

Innovative Ag Services, LLC
 1201 Delta View Road
 Suite 5
 Hanford, CA 93230

Description : #6 1R
 Project : Sun Valley

Lab No. : VI 2346087-006
 Customer No.: 4018573
 Reference : 41320
 Sampled On : September 7, 2023 at 10:45
 Sampled By : Zeke
 Received On : September 7, 2023 at 15:49
 Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U1	09/21/2023	09:23	sta	EPA 351.2	09/25/2023	21:04	lcr
Nitrate Nitrogen	12.8	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	14:08	lfs
Nitrogen, Total as Nitrogen	12.8	0.5	mg/L		1	1	09/21/2023	09:23	sta	Calc.	09/25/2023	21:04	lcr
Nitrate + Nitrite as N	12.8	0.4	mg/L		1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	14:08	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	09/21/2023	09:23	sta	EPA 351.2	09/25/2023	21:04	lcr
Conductivity	1070	1	umhos/cm		1		09/14/2023	09:03	krh	SM 4500-H+B	09/14/2023	12:39	krh
Solids, Total Dissolved (TDS)	960	20	mg/L		1		09/11/2023	12:45	ctl	SM 2540 C	09/12/2023	11:00	ctl

DQF Flags Definition:

- U Constituent results were non-detect.
- 1 The MS/MSD did not meet QC criteria.

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



September 29, 2023

Innovative Ag Services, LLC
 1201 Delta View Road
 Suite 5
 Hanford, CA 93230

Description : 4D
 Project : Sun Valley

Lab No. : VI 2346087-007
 Customer No.: 4018573
 Reference : 41320
 Sampled On : September 7, 2023 at 11:25
 Sampled By : Zeke
 Received On : September 7, 2023 at 15:49
 Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrate Nitrogen	22.9	0.4	mg/L	10	1		09/08/2023	13:00	lfs	SM 4500-NO3 F	09/08/2023	14:10	lfs
Conductivity	1110	1	umhos/cm	1600 ²	1		09/14/2023	09:03	krh	SM 4500-H+B	09/14/2023	11:20	krh

DQF Flags Definition:

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

MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

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September 29, 2023

Innovative Ag Services, LLC

Lab No. : VI 2346087

Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(CH 2377455-003) (VI 2346087-007) (CH 2377617-001)	Dup Dup Dup	umhos/cm umhos/cm umhos/cm		0.3% 0.09% 0.5%	5 5 5	
Solids, Total Dissolved	2540CE	09/11/2023:210123CTL (VI 2346087-001) (VI 2346087-001)	Blank LCS Dup Dup	mg/L mg/L mg/L mg/L	991.5	ND 101% 2.34% 2.98%	<20 90-110 5 5	
	2540CE	09/12/2023:210204CTL (CC 2383052-001) (CC 2383052-001)	Blank LCS Dup Dup	mg/L mg/L mg/L mg/L	991.5	ND 102% 0.3% 0.3%	<20 90-110 5 5	
Nitrogen, Total Kjeldahl	351.2	09/19/2023:210514STA (VI 2346087-004) (VI 2346087-005) (SP 2315057-001) (STK2352105-003)	Blank LCS MS MSD MSRPD MS MSD MSRPD Blank LCS MS MSD MSRPD MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00	ND 92.3% 82.0% 81.2% 1.0% 87.8% 87.9% 0.1% ND 92.9% 96.1% 94.6% 1.5% 90.4% 92.1% 1.9%	<0.5 73-124 90-110 90-110 ≤20 90-110 90-110 ≤20 <0.5 73-124 90-110 90-110 90-110 ≤20 90-110 90-110 ≤20	
	351.2	09/21/2023:210595STA (STK2352400-001) (STK2352400-004)	Blank LCS MS MSD MSRPD MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 12.00 12.00 12.00 12.00 12.00	ND 91.7% 89.3% 88.1% 1.2% 89.7% 93.6% 3.8%	<0.5 73-124 90-110 90-110 ≤20 90-110 90-110 ≤20	
Nitrate + Nitrite as N	4500NO3F	09/08/2023:210077LFS (VI 2346077-001)	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	11.22 5.609 5.609 5.609 5.609	ND 96.2% 97.0% 99.3% 1.9%	<0.4 80-120 66-125 66-125 ≤30.4	
Nitrate Nitrogen	4500NO3F	09/08/2023:210077LFS (VI 2346077-001)	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	11.22 5.609 5.609 5.609 5.609	ND 96.2% 97.0% 99.3% 1.9%	<0.4 80-120 66-125 66-125 ≤30.4	

Definition

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

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

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

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

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

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

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

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

Explanation

435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.



Laboratory Analysis Work Order

Nº 41320

ID: # 0287*2346057*LABORATORY: FGLSITE NAME: SUN VALLEY DAIRYBilling: IAS

Authorized Copy Release to:

Innovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:**Irrigation/Ground Water (ELAP Standards)**

- W1 EC, NO₃N (Dom)
W2 EC, NO₃N, TDS, TN (Irr)
W3 NH₄N (Ammonium)
W4 EC, NO₃N, Ca, Mg, Na, K, HCO₃, CO₃, SO₄S, Cl, TDS (Dom, GM)
W5 EC, NO₃N, TDS, TN, Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl (Irr, GM)
W6 NO₃N, NO₂ (Dam ILRP, Annually)
W7 Ca, Mg, Na, K, HCO₃, CO₃, SO₄, Cl + Lab Filtering (GWM)
W8 Other: _____

Plant Tissue

- P1 TN, NO₃N, PO₄P, K (Mid Season - Wheat)
P2 TN, P, K (Mid-season - Com)
P3 TN, TP, TK, Ash, %M (At Harvest)
P4 TN, %M
P5 % Moisture
P6 NIR
P7 Other: _____

Process Waste Water (lagoon)

- L1 EC, NH₄N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO₃N, NH₄N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl (Biennially)
L4 Other: _____

Manure

- M1 TN, TP, TK, %M (2/year)
M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)
M3 Other: _____

Soil

- S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO₃N, PO₄P, K-AA, Zn, Mn, Fe, Cu, SO₄S
S2 S1 + CEC, CaCO₃, OM, C:N, TN
S3 NO₃N, NH₄N
S4 Other: _____

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH ₃ N *	pH	Temp
1 #2 IR	IRR	W2	9-7 / 11:30	Zek			
2 #3 IR	IRR	W2	/ 11:05				
3 #4 IR	IRR	W2	/ 11:00				
4 #5 IR	IRR	W2	/ 11:20				
5 IW-S2	JRR	W2	/ 11:10				
6 #6 IR	IRR	W2	/ 10:45				
7 4D	DOM	W1	- / 11:25				
8							

* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of samples, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 st	<i>E</i>	IAS		9-7-23 / 3:15
2 nd	<i>ASB</i>	FGL	9/7/23 1535	
3 rd	<i>ASB</i>	FGL		9/7/23 1549
4 th	<i>DA</i>		9/7/23 1559	

LABORATORY USE ONLY

Logged In By: *ASB*Total Samples: *9/7/23 10:55*Laboratory #: *171*



December 18, 2023

Lab No. : VI 2348279

Innovative Ag Services, LLC
1201 Delta View Road
Suite 5
Hanford, CA 93230

Customer No. : 4018573
Reference : 42136

Laboratory Report

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

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

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
2D	12/06/2023	12/06/2023	VI 2348279-001	DW
3D	12/06/2023	12/06/2023	VI 2348279-002	DW

Sampling and Receipt Information:

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

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

Test Summary

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

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

KD: JRD

Approved By **Kelly A. Dunnahoo, B.S.**  Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-12-18



December 18, 2023

Innovative Ag Services, LLC
 1201 Delta View Road
 Suite 5
 Hanford, CA 93230

Description : 2D
 Project : 0287 Sun Valley

Lab No. : VI 2348279-001
 Customer No. : 4018573
 Reference : 42136
 Sampled On : December 6, 2023 at 08:45
 Sampled By : Zeke
 Received On : December 6, 2023 at 15:56
 Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrate Nitrogen	15.7	0.4	mg/L	10	1		12/07/2023	12:00	lfs	SM 4500-NO3 F	12/07/2023	14:51	lfs
Conductivity	1140	1	umhos/cm	1600 ²	1		12/08/2023	10:31	krh	SM 4500-H+B	12/08/2023	11:41	krh

DQF Flags Definition:

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

MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.



December 18, 2023

Innovative Ag Services, LLC
 1201 Delta View Road
 Suite 5
 Hanford, CA 93230

Description : 3D
 Project : 0287 Sun Valley

Lab No. : VI 2348279-002
 Customer No. : 4018573
 Reference : 42136
 Sampled On : December 6, 2023 at 08:35
 Sampled By : Zeke
 Received On : December 6, 2023 at 15:56
 Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrate Nitrogen	21.1	0.4	mg/L	10	1		12/07/2023	12:00	lfs	SM 4500-NO3 F	12/07/2023	14:53	lfs
Conductivity	1090	1	umhos/cm	1600 ²	1		12/08/2023	10:31	krh	SM 4500-H+B	12/08/2023	11:44	krh

DQF Flags Definition:

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

MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.



December 18, 2023

Innovative Ag Services, LLC

Lab No. : VI 2348279

Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2348247-001)	Dup	umhos/cm		1.04%	5	
Nitrate Nitrogen	4500NO3F	12/07/2023:213812LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	101%	80-120	
			MS	mg/L	5.609	97.9%	66-125	
		(STK2356665-002)	MSD	mg/L	5.609	94.8%	66-125	
			MSRPD	mg/L		1.5%	≤30.4	

Definition

- Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
- DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.
- Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
- LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
- MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
- MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
- MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
- ND : Non-detect - Result was below the DQO listed for the analyte.

Corporate Offices & Laboratory

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**Laboratory Analysis Work Order**

Nº 42136

ID: # 0287

2348279

SITE NAME: SUN VALLEYBilling: TAS**ANALYSIS TO BE COMPLETED:****Irrigation/Ground Water (ELAP Standards)** W1 EC, NO₃N (Dom) W2 EC, NO₃N, TDS, TN (Irr)W3 NH₄N (Ammonium)W4 EC, NO₃N, Ca, Mg, Na, K, HCO₃, CO₃, SO₄S, Cl, TDS (Dom, GM)W5 EC, NO₃N, TDS, TN, Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl (Irr, GM)W6 NO₃N, NO₂ (Dom ILRP, Annually)W7 Ca, Mg, Na, K, HCO₃, CO₃, SO₄, Cl + Lab Filtering (GWM)

W8 Other: _____

Plant TissueP1 TN, NO₃N, PO₄P, K (Mid Season - Wheat)

P2 TN, P, K (Mid-season - Corn)

P3 TN, TP, TK, Ash, %M (At Harvest)

P4 TN, %M

P5 % Moisture

P6 NIR

P7 Other: _____

11.6 °C
701
12/6/23 15:40

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH ₃ N*	pH	Temp
1	ZD	W1	12-6-23 18:45	Zeta			
2	ZD	W1	12-6-23 18:35	Zeta			
3							
4							
5							
6							
7							
8							

* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of samples, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 st		TAS		12-6-23 / 2:30
2 nd	EMA	FOL	12/6/23 15:41	
3 rd	EMA	FOL		12/6/23 15:56
4 th			12/6/23 15:56	

LABORATORY USE ONLY

Logged In By:

Total Samples: 103Laboratory #: GJ WMA