



K & M Visser

2023 Annual Report

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

K & M Visser 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Facility Information:

Name of Dairy	K & M Visser
Facility Address	9279 Avenue 96, Pixley CA 93256

Owner/Operator as of 12/31/2023

Operator Name	Keith Visser
Operator Phone	(559) 967-1475
Owner Name	Keith Visser
Owner Phone	(559) 967-1475

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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CENTRAL VALLEY REGION

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.

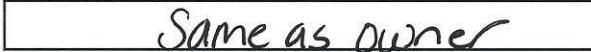
It was not possible to collect any of the required samples or perform visual observations due to adverse climatic conditions.

20. Mortality Management Practices

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

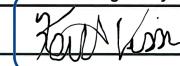
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CENTRAL VALLEY REGION

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



Signature of Operator of Facility

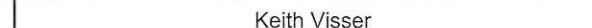
DocuSigned by:



Signature of Owner of Facility



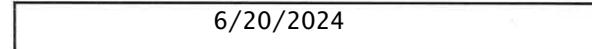
Print Name



Print Name



Title and Date



Title and Date



INNOVATIVE AG SERVICES

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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	4,210	4,104	Milk Flushed Lane	1,400	104,154.96	1,482,980.40	254,653.20	344,530.80	2,705,315.76
Hol Dry Cows	700	682	Flushed	1,450	9,951.82	124,465.00	17,425.10	82,146.90	175,645.01
Hol Heifers(15-24)	2,200	2,145	Flushed	1,000	22,390.64	297,511.50	46,975.50	140,926.50	552,431.88
Hol Heifers (7-14)	1,405	1,369	Flushed	750	13,166.05	129,918.10	21,986.14	74,952.75	165,270.81
Hol Calves (4-6)	425	414	Milk Flushed Lane	300	1,435.54	21,155.40	6,044.40	12,088.80	9,912.82
Hol Calves (0-3)	560	546	Calves Dry Scrape	150	1,893.26	3,985.80	1,992.90	7,971.60	4,796.91
	9,500	9,260			152,992.27	2,060,016.20	349,077.24	662,617.35	3,613,373.19

* 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)**
33,933,099	489.25	109.68	511.50	3,410.00	138,292.73	31,001.03	144,581.98	963,879.87

* 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).



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Nutrient Applications (Attachment B)

Field Name: 1

Wheat, 74 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)
10/05/2022	Corral Solids: Main Corral	3.00	Tons	38.50	2.73	0.77	3.46	%	222		7,455	2,105	9,448	0	
11/25/2022	Ground Water: Well Avg	5.00	Acre Inches		4.77			mg/L			400	0	0	18,184	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,036				
02/07/2023	Ground Water: Well Avg	5.20	Acre Inches		2.90			mg/L			252	0	0	16,625	
02/07/2023	Waste Water: Main Lagoon	0.50	Acre Inches	421.00	111.00	651.00		mg/L		1,004,709	3,523	929	5,449	28,790	
04/06/2023	Ground Water: Well Avg	5.60	Acre Inches		2.90			mg/L			272	0	0	17,904	
05/13/2023	Harvest	17.30	Tons	67.30	1.62	0.43	1.53	%						13,563	
Acre Inches Applied:		16.30		Totals:					222	1,004,709	12,937	3,034	14,896	81,503	13,563
Season Nitrogen Ratio:		0.95		Lbs Per Acre:							175	41	201	1,101	183

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Nutrient Applications (Attachment B)

Field Name: 1

Milo, 74 Acres Planted on 06/27/2023

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)
07/06/2023	Ground Water: Well Avg	5.00	Acre Inches	2.90			mg/L			243	0	0	15,985	
07/06/2023	Ground Water: Well Avg	5.20	Acre Inches	2.90			mg/L			252	0	0	16,625	
08/22/2023	Ground Water: Well Avg	5.10	Acre Inches	2.90			mg/L			248	0	0	16,305	
08/22/2023	Waste Water: Main Lagoon	0.50	Acre Inches	714.00	154.00	370.00	mg/L		1,004,709	5,976	1,289	3,097	32,305	
09/28/2023	Ground Water: Well Avg	5.00	Acre Inches	2.90			mg/L			243	0	0	15,985	
09/28/2023	Waste Water: Main Lagoon	0.60	Acre Inches	299.00	46.70	429.00	mg/L		1,205,651	3,003	469	4,308	30,028	
10/28/2023	Ground Water: Well Avg	4.90	Acre Inches	2.90			mg/L			238	0	0	15,666	
10/28/2023	Waste Water: Main Lagoon	0.50	Acre Inches	299.00	46.70	429.00	mg/L		1,004,709	2,503	391	3,590	25,024	
12/06/2023	Harvest	26.10	Tons	72.60	1.41	0.30	1.79 %							14,924
Acre Inches Applied:		26.80		Totals:				3,215,069	12,704	2,149	10,996	167,924	14,924	
Season Nitrogen Ratio: 0.85				Lbs Per Acre:				172	29	149	2,269	202		

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Nutrient Applications (Attachment B)

Field Name: 2

Corn, 75 Acres Planted on 04/09/2023

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)
10/01/2022	Ground Water: Well Avg	4.30	Acre Inches	4.77			mg/L			348	0	0	15,850	
10/01/2022	Waste Water: Main Lagoon	0.50	Acre Inches	339.00	60.90	496.00	mg/L		1,018,286	2,876	517	4,208	39,528	
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00			%			1,050				
04/15/2023	Ground Water: Well Avg	5.20	Acre Inches	2.90			mg/L			256	0	0	16,850	
04/15/2023	Waste Water: Main Lagoon	0.60	Acre Inches	421.00	111.00	651.00	mg/L		1,221,944	4,286	1,130	6,626	35,015	
05/01/2023	Ground Water: Well Avg	5.30	Acre Inches	2.90			mg/L			261	0	0	17,174	
05/01/2023	Waste Water: Main Lagoon	0.50	Acre Inches	523.00	127.00	596.00	mg/L		1,018,286	4,436	1,077	5,056	28,416	
05/24/2023	Ground Water: Well Avg	5.00	Acre Inches	2.90			mg/L			246	0	0	16,202	
06/04/2023	Ground Water: Well Avg	5.50	Acre Inches	2.90			mg/L			271	0	0	17,822	
06/22/2023	Ground Water: Well Avg	5.30	Acre Inches	2.90			mg/L			261	0	0	17,174	
07/04/2023	Ground Water: Well Avg	5.80	Acre Inches	2.90			mg/L			285	0	0	18,794	
07/04/2023	Waste Water: Main Lagoon	0.45	Acre Inches	714.00	154.00	370.00	mg/L		916,458	5,451	1,176	2,824	29,468	
07/20/2023	Harvest	27.80	Tons	**	0.42	0.08	0.34	%						17,514
Acre Inches Applied:		38.45		Totals:				4,174,974	20,026	3,899	18,714	252,290	17,514	
Season Nitrogen Ratio: 1.14				Lbs Per Acre:				267	52	250	3,364			234

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Nutrient Applications (Attachment B)

Field Name: 3

Wheat, 75 Acres Planted on 11/30/2022

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)
10/11/2022	Corral Solids: Main Corral	2.00	Tons	38.50	2.73	0.77	3.46	%	150		5,037	1,423	6,384	0	
10/23/2022	Ground Water: Well Avg	4.30	Acre Inches		4.77			mg/L			348	0	0	15,850	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,050				
01/19/2023	Ground Water: Well Avg	4.60	Acre Inches		2.90			mg/L			226	0	0	14,906	
02/21/2023	Ground Water: Well Avg	4.90	Acre Inches		2.90			mg/L			241	0	0	15,878	
02/21/2023	Waste Water: Main Lagoon	0.50	Acre Inches	421.00	111.00	651.00	mg/L			1,018,286	3,571	941	5,522	29,180	
03/10/2023	Ground Water: Well Avg	5.30	Acre Inches		2.90			mg/L			261	0	0	17,174	
04/15/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90			mg/L			236	0	0	15,554	
05/12/2023	Harvest	18.20	Tons	67.70	1.32	0.33	1.09	%							11,640
Acre Inches Applied:		24.40		Totals:					150	1,018,286	10,970	2,364	11,906	108,539	11,640
Season Nitrogen Ratio:		0.94		Lbs Per Acre:							146	32	159	1,447	155

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Nutrient Applications (Attachment B)

Field Name: 3

Milo, 75 Acres Planted on 06/28/2023

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)
05/20/2023	Corral Solids: Main Corral	5.00	Tons	55.10	2.21	0.97	1.87	%	375		7,442	3,277	6,297	0	
06/04/2023	Ground Water: Well Avg	5.10	Acre Inches		2.90			mg/L			251	0	0	16,526	
07/15/2023	Ground Water: Well Avg	5.60	Acre Inches		2.90			mg/L			275	0	0	18,146	
08/03/2023	Ground Water: Well Avg	5.70	Acre Inches		2.90			mg/L			280	0	0	18,470	
08/03/2023	Waste Water: Main Lagoon	0.50	Acre Inches	714.00	154.00	370.00		mg/L		1,018,286	6,056	1,306	3,139	32,742	
08/30/2023	Ground Water: Well Avg	5.20	Acre Inches		2.90			mg/L			256	0	0	16,850	
09/15/2023	Ground Water: Well Avg	5.30	Acre Inches		2.90			mg/L			261	0	0	17,174	
10/01/2023	Ground Water: Well Avg	5.80	Acre Inches		2.90			mg/L			285	0	0	18,794	
12/06/2023	Harvest	25.60	Tons	73.00	1.61	0.33	2.30	%						16,693	
Acre Inches Applied:		33.20		Totals:					375	1,018,286	15,107	4,583	9,436	138,699	16,693
Season Nitrogen Ratio:		0.91		Lbs Per Acre:							201	61	126	1,849	223

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Nutrient Applications (Attachment B)

Field Name: 4

Wheat, 74 Acres Planted on 11/18/2022

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)
11/24/2022	Ground Water: Well Avg	4.90	Acre Inches	4.77			mg/L			391	0	0	17,821	
11/24/2022	Waste Water: Main Lagoon	0.60	Acre Inches	339.00	60.90	496.00	mg/L		1,205,651	3,405	612	4,982	46,801	
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00			%			1,036				
01/10/2023	Ground Water: Well Avg	5.30	Acre Inches	2.90			mg/L			258	0	0	16,945	
01/10/2023	Waste Water: Main Lagoon	0.50	Acre Inches	339.00	60.90	496.00	mg/L		1,004,709	2,837	510	4,151	39,001	
02/25/2023	Ground Water: Well Avg	5.25	Acre Inches	2.90			mg/L			255	0	0	16,785	
02/25/2023	Waste Water: Main Lagoon	0.75	Acre Inches	421.00	111.00	651.00	mg/L		1,507,064	5,285	1,393	8,173	43,185	
04/24/2023	Ground Water: Well Avg	5.20	Acre Inches	2.90			mg/L			252	0	0	16,625	
04/24/2023	Waste Water: Main Lagoon	0.50	Acre Inches	421.00	111.00	651.00	mg/L		1,004,709	3,523	929	5,449	28,790	
05/15/2023	Harvest	18.70	Tons	**	0.55	0.08	0.42	%						15,222
Acre Inches Applied:		23.00		Totals:				4,722,133	17,242	3,444	22,754	225,952	15,222	
Season Nitrogen Ratio:		1.13		Lbs Per Acre:				233	47	307	3,053	206		

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Nutrient Applications (Attachment B)

Field Name: 5

Corn, 78 Acres Planted on 04/17/2023

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)
09/25/2022	Corral Solids: Main Corral	8.00	Tons	38.50	2.73	0.77	3.46	%	624		20,953	5,918	26,556	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,092				
04/25/2023	Ground Water: Well Avg	5.10	Acre Inches		2.90			mg/L			261	0	0	17,187	
05/11/2023	Ground Water: Well Avg	5.50	Acre Inches		2.90			mg/L			282	0	0	18,534	
05/30/2023	Ground Water: Well Avg	5.30	Acre Inches		2.90			mg/L			271	0	0	17,860	
06/15/2023	Ground Water: Well Avg	5.20	Acre Inches		2.90			mg/L			266	0	0	17,523	
07/01/2023	Ground Water: Well Avg	5.60	Acre Inches		2.90			mg/L			286	0	0	18,871	
07/16/2023	Ground Water: Well Avg	5.25	Acre Inches		2.90			mg/L			268	0	0	17,692	
08/07/2023	Harvest	30.10	Tons	69.40	1.20	0.27	1.44	%							17,242
Acre Inches Applied:		31.95		Totals:					624	23,680	5,918	26,556	107,668	17,242	
Season Nitrogen Ratio:		1.37		Lbs Per Acre:							304	76	340	1,380	221



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Nutrient Applications (Attachment B)

Field Name: 6

Wheat, 78 Acres Planted on 11/29/2022

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)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00		%			1,092					
01/15/2023	Ground Water: Well Avg	4.30	Acre Inches	2.90		mg/L			220	0	0	14,490		
01/15/2023	Waste Water: Main Lagoon	0.50	Acre Inches	421.00	111.00	651.00	mg/L	1,059,018	3,714	979	5,743	30,347		
02/22/2023	Ground Water: Well Avg	4.30	Acre Inches	2.90		mg/L			220	0	0	14,490		
03/15/2023	Ground Water: Well Avg	4.30	Acre Inches	2.90		mg/L			220	0	0	14,490		
03/15/2023	Waste Water: Main Lagoon	0.68	Acre Inches	421.00	111.00	651.00	mg/L	1,440,264	5,051	1,331	7,810	41,271		
04/10/2023	Ground Water: Well Avg	4.30	Acre Inches	2.90		mg/L			220	0	0	14,490		
05/14/2023	Harvest	18.30	Tons	70.20	1.57	0.29	1.38 %							13,357
Acre Inches Applied:		18.38		Totals:				2,499,282	10,737	2,310	13,553	129,578	13,357	
Season Nitrogen Ratio:		0.80		Lbs Per Acre:				138	30	174	1,661	171		



K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: 6

Milo, 78 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)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
05/21/2023	Corral Solids: Main Corral	4.00	Tons	55.10	2.21	0.97	1.87	%	312		6,192	2,726	5,239	0	
06/03/2023	Ground Water: Well Avg	4.60	Acre Inches		2.90			mg/L			236	0	0	15,502	
07/07/2023	Ground Water: Well Avg	4.60	Acre Inches		2.90			mg/L			236	0	0	15,502	
07/21/2023	Ground Water: Well Avg	5.25	Acre Inches		2.90			mg/L			268	0	0	17,692	
07/21/2023	Waste Water: Main Lagoon	0.50	Acre Inches	714.00	154.00	370.00		mg/L		1,059,018	6,298	1,359	3,264	34,052	
08/09/2023	Ground Water: Well Avg	5.30	Acre Inches		2.90			mg/L			271	0	0	17,860	
08/29/2023	Ground Water: Well Avg	5.40	Acre Inches		2.90			mg/L			276	0	0	18,197	
09/15/2023	Ground Water: Well Avg	5.10	Acre Inches		2.90			mg/L			261	0	0	17,187	
12/05/2023	Harvest	26.10	Tons	72.20	1.29	0.25	1.62	%							14,602
Acre Inches Applied:		30.75		Totals:					312	1,059,018	14,038	4,085	8,504	135,991	14,602
Season Nitrogen Ratio:		0.96		Lbs Per Acre:							180	52	109	1,743	187

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: 7

Corn, 103 Acres Planted on 04/15/2023

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)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00	%					1,442				
04/28/2023	Ground Water: Well Avg	5.10	Acre Inches	2.90		mg/L				345	0	0	22,695	
05/15/2023	Ground Water: Well Avg	5.30	Acre Inches	2.90		mg/L				358	0	0	23,585	
05/15/2023	Waste Water: Main Lagoon	0.60	Acre Inches	523.00	127.00	596.00	mg/L		1,678,136	7,311	1,776	8,332	46,829	
05/29/2023	Ground Water: Well Avg	5.00	Acre Inches	2.90		mg/L				338	0	0	22,250	
06/10/2023	Ground Water: Well Avg	5.10	Acre Inches	2.90		mg/L				345	0	0	22,695	
06/10/2023	Waste Water: Main Lagoon	0.50	Acre Inches	523.00	127.00	596.00	mg/L		1,398,446	6,092	1,479	6,943	39,025	
06/28/2023	Ground Water: Well Avg	5.35	Acre Inches	2.90		mg/L				362	0	0	23,807	
06/28/2023	Waste Water: Main Lagoon	0.25	Acre Inches	523.00	127.00	596.00	mg/L		699,223	3,047	740	3,471	19,512	
07/10/2023	Ground Water: Well Avg	5.50	Acre Inches	2.90		mg/L				372	0	0	24,475	
07/20/2023	Ground Water: Well Avg	4.80	Acre Inches	2.90		mg/L				324	0	0	21,360	
08/07/2023	Harvest	32.00	Tons	72.70	1.36	0.32	1.43	%						24,475
Acre Inches Applied:		37.50		Totals:				3,775,805	20,336	3,994	18,746	266,233	24,475	
Season Nitrogen Ratio:		0.83		Lbs Per Acre:				197	39	182	2,585	238		



K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: 8

Corn, 71 Acres Planted on 04/28/2023

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)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00	%			994						
05/11/2023	Ground Water: Well Avg	4.50	Acre Inches	2.90	mg/L			209		0	0	13,803		
05/11/2023	Waste Water: Main Lagoon	0.50	Acre Inches	523.00	127.00	596.00	mg/L	963,978	4,200	1,020	4,786	26,900		
05/31/2023	Ground Water: Well Avg	5.60	Acre Inches	2.90	mg/L			261		0	0	17,178		
05/31/2023	Waste Water: Main Lagoon	0.50	Acre Inches	523.00	127.00	596.00	mg/L	963,978	4,200	1,020	4,786	26,900		
06/12/2023	Ground Water: Well Avg	5.40	Acre Inches	2.90	mg/L			251		0	0	16,564		
06/12/2023	Waste Water: Main Lagoon	0.55	Acre Inches	523.00	127.00	596.00	mg/L	1,060,375	4,620	1,122	5,265	29,590		
06/27/2023	Ground Water: Well Avg	5.55	Acre Inches	2.90	mg/L			258		0	0	17,024		
07/09/2023	Ground Water: Well Avg	5.25	Acre Inches	2.90	mg/L			244		0	0	16,104		
07/20/2023	Ground Water: Well Avg	4.90	Acre Inches	2.90	mg/L			228		0	0	15,031		
08/07/2023	Harvest	32.20	Tons	69.50	1.29	0.24	1.50 %							17,990
Acre Inches Applied:		32.75		Totals:				2,988,331	15,465	3,161	14,837	179,095	17,990	
Season Nitrogen Ratio:		0.86		Lbs Per Acre:				218	45	209	2,522	253		

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: 9

Wheat, 76 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)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
10/01/2022	Corral Solids: Main Corral	5.00	Tons	38.50	2.73	0.77	3.46	%	380		12,760	3,604	16,172	0	
11/25/2022	Ground Water: Well Avg	3.80	Acre Inches		4.77			mg/L			312	0	0	14,194	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,064				
01/25/2023	Ground Water: Well Avg	4.00	Acre Inches		2.90			mg/L			199	0	0	13,134	
02/20/2023	Ground Water: Well Avg	4.50	Acre Inches		2.90			mg/L			224	0	0	14,775	
03/10/2023	Ground Water: Well Avg	4.20	Acre Inches		2.90			mg/L			210	0	0	13,790	
04/18/2023	Ground Water: Well Avg	4.10	Acre Inches		2.90			mg/L			204	0	0	13,462	
05/13/2023	Harvest	19.20	Tons	70.70	1.72	0.36	1.37	%							14,708
Acre Inches Applied:		20.60							Totals:	380	14,973	3,604	16,172	69,355	14,708
Season Nitrogen Ratio:		1.02							Lbs Per Acre:		197	47	213	913	194

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: 9

Milo, 76 Acres Planted on 06/22/2023

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.							
06/01/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90					239	0	0	15,761	
07/03/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90					239	0	0	15,761	
07/03/2023	Waste Water: Main Lagoon	0.50	Acre Inches	714.00	154.00	370.00	mg/L		1,031,863	6,137	1,324	3,181	33,179	
07/28/2023	Ground Water: Well Avg	5.10	Acre Inches		2.90					255	0	0	16,746	
07/28/2023	Waste Water: Main Lagoon	0.50	Acre Inches	714.00	154.00	370.00	mg/L		1,031,863	6,137	1,324	3,181	33,179	
08/10/2023	Ground Water: Well Avg	5.00	Acre Inches		2.90					249	0	0	16,418	
08/10/2023	Waste Water: Main Lagoon	0.40	Acre Inches	714.00	154.00	370.00	mg/L		825,491	4,910	1,059	2,544	26,543	
09/15/2023	Ground Water: Well Avg	5.60	Acre Inches		2.90					279	0	0	18,387	
10/01/2023	Ground Water: Well Avg	5.40	Acre Inches		2.90					269	0	0	17,731	
12/05/2023	Harvest	25.70	Tons	73.90	1.44	0.31	1.65	%						14,682
Acre Inches Applied:		32.10						Totals:	2,889,218	18,714	3,707	8,906	193,703	14,682
Season Nitrogen Ratio:		1.27						Lbs Per Acre:	246	49	117	2,549	193	

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C1

Corn, 79 Acres Planted on 04/24/2023

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)
11/08/2022	Corral Solids: Main Corral	8.00	Tons	38.50	2.73	0.77	3.46	%	632		21,222	5,994	26,896	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,106				
05/09/2023	Ground Water: Well Avg	5.20	Acre Inches		2.90			mg/L			269	0	0	17,748	
05/27/2023	Ground Water: Well Avg	5.60	Acre Inches		2.90			mg/L			290	0	0	19,113	
06/10/2023	Ground Water: Well Avg	5.80	Acre Inches		2.90			mg/L			300	0	0	19,796	
06/30/2023	Ground Water: Well Avg	5.75	Acre Inches		2.90			mg/L			298	0	0	19,625	
07/18/2023	Ground Water: Well Avg	5.40	Acre Inches		2.90			mg/L			280	0	0	18,431	
07/31/2023	Ground Water: Well Avg	5.25	Acre Inches		2.90			mg/L			272	0	0	17,919	
08/13/2023	Harvest	31.50	Tons	70.40	1.40	0.28	1.63	%							20,625
Acre Inches Applied:		33.00		Totals:					632		24,037	5,994	26,896	112,632	20,625
Season Nitrogen Ratio:		1.17		Lbs Per Acre:							304	76	340	1,426	261

K & M Visser 2023
Nutrient Applications (Attachment B)

Field Name: C2

Wheat, 75 Acres Planted on 11/22/2022

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							
10/11/2022	Corral Solids: Main Corral	4.00	Tons	38.50	2.73	0.77	3.46	%	300		10,074	2,845	12,767	0	
10/27/2022	Ground Water: Well Avg	4.20	Acre Inches		4.77			mg/L			340	0	0	15,481	
12/08/2022	Ground Water: Well Avg	3.50	Acre Inches		4.77			mg/L			284	0	0	12,901	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,050				
01/31/2023	Ground Water: Well Avg	3.60	Acre Inches		2.90			mg/L			177	0	0	11,665	
02/28/2023	Ground Water: Well Avg	3.25	Acre Inches		2.90			mg/L			160	0	0	10,531	
03/15/2023	Ground Water: Well Avg	3.75	Acre Inches		2.90			mg/L			184	0	0	12,151	
04/11/2023	Ground Water: Well Avg	3.30	Acre Inches		2.90			mg/L			162	0	0	10,693	
05/14/2023	Harvest	18.90	Tons	64.10	0.90	0.21	0.64	%							9,160
Acre Inches Applied:		21.60		Totals:					300		12,430	2,845	12,767	73,420	9,160
Season Nitrogen Ratio:		1.36		Lbs Per Acre:							166	38	170	979	122

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C2

Corn, 75 Acres Planted on 05/16/2023

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)
06/15/2023	Ground Water: Well Avg	5.75	Acre Inches	2.90			mg/L		283	0	0	18,632		
06/15/2023	Waste Water: Main Lagoon	0.50	Acre Inches	523.00	127.00	596.00	mg/L		1,018,286	4,436	1,077	5,056	28,416	
07/01/2023	Ground Water: Well Avg	5.75	Acre Inches	2.90			mg/L		283	0	0	18,632		
07/01/2023	Waste Water: Main Lagoon	0.50	Acre Inches	714.00	154.00	370.00	mg/L		1,018,286	6,056	1,306	3,139	32,742	
07/10/2023	Ground Water: Well Avg	5.80	Acre Inches	2.90			mg/L		285	0	0	18,794		
07/21/2023	Ground Water: Well Avg	5.90	Acre Inches	2.90			mg/L		290	0	0	19,118		
07/21/2023	Waste Water: Main Lagoon	0.60	Acre Inches	714.00	154.00	370.00	mg/L		1,221,944	7,268	1,568	3,766	39,290	
08/01/2023	Ground Water: Well Avg	5.70	Acre Inches	2.90			mg/L		280	0	0	18,470		
08/14/2023	Harvest	30.10	Tons	66.60	1.59	0.29	1.60	%						23,978
Acre Inches Applied:		30.50		Totals:					3,258,516	19,181	3,951	11,961	194,092	23,978
Season Nitrogen Ratio:		0.80		Lbs Per Acre:					256	53	159	2,588		320

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C3

Wheat, 81 Acres Planted on 11/03/2022

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.							
10/03/2022	Corral Solids: Main Corral	5.00	Tons	38.50	2.73	0.77	3.46	%	405	13,599	3,841	17,236	0	
10/12/2022	Ground Water: Well Avg	3.50	Acre Inches		4.77			mg/L		306	0	0	13,933	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%		1,134				
01/23/2023	Ground Water: Well Avg	4.25	Acre Inches		2.90			mg/L		226	0	0	14,872	
02/10/2023	Ground Water: Well Avg	4.60	Acre Inches		2.90			mg/L		245	0	0	16,098	
03/01/2023	Ground Water: Well Avg	4.30	Acre Inches		2.90			mg/L		228	0	0	15,047	
04/08/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90			mg/L		255	0	0	16,798	
05/12/2023	Harvest	20.50	Tons	62.70	1.15	0.30	0.91	%						14,245
Acre Inches Applied:		21.45						Totals:	405	15,993	3,841	17,236	76,748	14,245
Season Nitrogen Ratio:		1.12						Lbs Per Acre:		197	47	213	948	176

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C3

Milo, 81 Acres Planted on 06/26/2023

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.							
05/25/2023	Corral Solids: Main Corral	7.00	Tons	55.10	2.21	0.97	1.87	%	567	11,253	4,954	9,522	0	
06/07/2023	Ground Water: Well Avg	4.50	Acre Inches		2.90			mg/L		239	0	0	15,747	
07/10/2023	Ground Water: Well Avg	5.25	Acre Inches		2.90			mg/L		279	0	0	18,372	
07/27/2023	Ground Water: Well Avg	5.30	Acre Inches		2.90			mg/L		282	0	0	18,547	
08/07/2023	Ground Water: Well Avg	5.40	Acre Inches		2.90			mg/L		287	0	0	18,897	
08/23/2023	Ground Water: Well Avg	5.10	Acre Inches		2.90			mg/L		271	0	0	17,848	
09/15/2023	Ground Water: Well Avg	5.60	Acre Inches		2.90			mg/L		297	0	0	19,597	
12/06/2023	Harvest	22.80	Tons	71.20	1.29	0.26	1.55	%						13,722
Acre Inches Applied:		31.15						Totals:	567	12,907	4,954	9,522	109,009	13,722
Season Nitrogen Ratio:		0.94						Lbs Per Acre:		159	61	118	1,346	169

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C4

Wheat, 81 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)
10/01/2022	Corral Solids: Main Corral	5.00	Tons	38.50	2.73	0.77	3.46 %	405		13,599	3,841	17,236	0	
10/13/2022	Ground Water: Well Avg	3.60	Acre Inches		4.77				mg/L		191	0	0	12,598
12/08/2022	Ground Water: Well Avg	3.50	Acre Inches		4.77				mg/L		306	0	0	13,933
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00				%		1,134			
01/15/2023	Ground Water: Well Avg	4.10	Acre Inches		2.90				mg/L		218	0	0	14,348
02/16/2023	Ground Water: Well Avg	3.80	Acre Inches		2.90				mg/L		202	0	0	13,298
03/08/2023	Ground Water: Well Avg	3.25	Acre Inches		2.90				mg/L		173	0	0	11,373
04/18/2023	Ground Water: Well Avg	3.90	Acre Inches		2.90				mg/L		207	0	0	13,648
05/11/2023	Harvest	19.40	Tons	70.00	1.57	0.34	1.80 %							14,803
Acre Inches Applied:		22.15		Totals:				405		16,030	3,841	17,236	79,197	14,803
Season Nitrogen Ratio:		1.08		Lbs Per Acre:						198	47	213	978	183

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C4

Corn, 81 Acres Planted on 05/13/2023

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)
06/15/2023	Ground Water: Well Avg	5.90	Acre Inches	2.90			mg/L			313	0	0	20,647	
06/15/2023	Waste Water: Main Lagoon	0.55	Acre Inches	523.00	127.00	596.00	mg/L		1,209,724	5,271	1,280	6,006	33,758	
06/30/2023	Ground Water: Well Avg	5.75	Acre Inches	2.90			mg/L			305	0	0	20,122	
06/30/2023	Waste Water: Main Lagoon	0.50	Acre Inches	714.00	154.00	370.00	mg/L		1,099,749	6,541	1,411	3,390	35,361	
07/11/2023	Ground Water: Well Avg	5.80	Acre Inches	2.90			mg/L			308	0	0	20,297	
07/25/2023	Ground Water: Well Avg	5.50	Acre Inches	2.90			mg/L			292	0	0	19,247	
08/07/2023	Harvest	25.00	Tons	69.50	1.26	0.23	1.37 %							15,564
Acre Inches Applied:		24.00		Totals:					2,309,473	13,030	2,691	9,396	149,432	15,564
Season Nitrogen Ratio:		0.84		Lbs Per Acre:						161	33	116	1,845	192

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C5

Wheat, 79 Acres Planted on 11/19/2022

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.							
10/10/2022	Corral Solids: Main Corral	5.00	Tons	38.50	2.73	0.77	3.46	%	395	13,263	3,746	16,810	0	
10/26/2022	Ground Water: Well Avg	4.25	Acre Inches		4.77			mg/L		363	0	0	16,501	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%		1,106				
01/12/2023	Ground Water: Well Avg	3.50	Acre Inches		2.90			mg/L		182	0	0	11,946	
01/31/2023	Ground Water: Well Avg	3.75	Acre Inches		2.90			mg/L		194	0	0	12,799	
02/28/2023	Ground Water: Well Avg	4.10	Acre Inches		2.90			mg/L		213	0	0	13,993	
04/05/2023	Ground Water: Well Avg	3.90	Acre Inches		2.90			mg/L		202	0	0	13,311	
05/13/2023	Harvest	18.60	Tons	67.40	1.37	0.30	0.98	%						13,125
Acre Inches Applied:		19.50						Totals:	395	15,523	3,746	16,810	68,549	13,125
Season Nitrogen Ratio:		1.18						Lbs Per Acre:		196	47	213	868	166

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C5

Milo, 79 Acres Planted on 06/24/2023

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.							
05/19/2023	Corral Solids: Main Corral	10.00	Tons	55.10	2.21	0.97	1.87	%	790	15,678	6,903	13,266	0	
06/03/2023	Ground Water: Well Avg	3.75	Acre Inches		2.90			mg/L		194	0	0	12,799	
07/06/2023	Ground Water: Well Avg	3.80	Acre Inches		2.90			mg/L		197	0	0	12,969	
07/24/2023	Ground Water: Well Avg	4.10	Acre Inches		2.90			mg/L		213	0	0	13,993	
08/07/2023	Ground Water: Well Avg	4.25	Acre Inches		2.90			mg/L		220	0	0	14,505	
08/30/2023	Ground Water: Well Avg	4.50	Acre Inches		2.90			mg/L		233	0	0	15,358	
09/15/2023	Ground Water: Well Avg	4.35	Acre Inches		2.90			mg/L		225	0	0	14,846	
12/05/2023	Harvest	22.75	Tons	73.90	1.42	0.32	1.73	%						13,322
Acre Inches Applied:		24.75						Totals:	790	16,961	6,903	13,266	84,472	13,322
Season Nitrogen Ratio:		1.27						Lbs Per Acre:		215	87	168	1,069	169



K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C6

Wheat, 71 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							
09/28/2022	Corral Solids: Main Corral	5.00	Tons	38.50	2.73	0.77	3.46	%	355		11,920	3,367	15,108	0	
10/12/2022	Ground Water: Well Avg	4.25	Acre Inches		4.77			mg/L			326	0	0	14,830	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			994				
01/14/2023	Ground Water: Well Avg	4.50	Acre Inches		2.90			mg/L			209	0	0	13,803	
02/08/2023	Ground Water: Well Avg	4.60	Acre Inches		2.90			mg/L			214	0	0	14,111	
03/15/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90			mg/L			224	0	0	14,724	
04/01/2023	Ground Water: Well Avg	4.75	Acre Inches		2.90			mg/L			222	0	0	14,571	
05/12/2023	Harvest	17.50	Tons	66.40	1.37	0.36	1.10	%							11,439
Acre Inches Applied:		22.90							Totals:	355	14,109	3,367	15,108	72,038	11,439
Season Nitrogen Ratio:		1.23							Lbs Per Acre:		199	47	213	1,015	161

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C7

Wheat, 71 Acres Planted on 11/04/2022

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	6.00	Tons	38.50	2.73	0.77	3.46	%	426		14,304	4,040	18,130	0	
10/10/2022	Ground Water: Well Avg	5.10	Acre Inches		4.77			mg/L			391	0	0	17,795	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			994				
01/09/2023	Ground Water: Well Avg	4.60	Acre Inches		2.90			mg/L			214	0	0	14,111	
02/02/2023	Ground Water: Well Avg	4.75	Acre Inches		2.90			mg/L			222	0	0	14,571	
03/06/2023	Ground Water: Well Avg	4.90	Acre Inches		2.90			mg/L			228	0	0	15,031	
04/14/2023	Ground Water: Well Avg	4.30	Acre Inches		2.90			mg/L			200	0	0	13,190	
05/12/2023	Harvest	20.20	Tons	61.00	1.18	0.29	0.89	%							13,200
Acre Inches Applied:		23.65							Totals:	426	16,554	4,040	18,130	74,697	13,200
Season Nitrogen Ratio:		1.25							Lbs Per Acre:		233	57	255	1,052	186

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C7

Milo, 71 Acres Planted on 06/20/2023

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.							
05/21/2023	Corral Solids: Main Corral	8.00	Tons	55.10	2.21	0.97	1.87	%	568	11,273	4,963	9,538	0	
06/01/2023	Ground Water: Well Avg	4.30	Acre Inches		2.90			mg/L		200	0	0	13,190	
07/02/2023	Ground Water: Well Avg	4.50	Acre Inches		2.90			mg/L		209	0	0	13,803	
07/12/2023	Ground Water: Well Avg	4.60	Acre Inches		2.90			mg/L		214	0	0	14,111	
07/29/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90			mg/L		224	0	0	14,724	
08/11/2023	Ground Water: Well Avg	4.75	Acre Inches		2.90			mg/L		222	0	0	14,571	
08/31/2023	Ground Water: Well Avg	4.25	Acre Inches		2.90			mg/L		198	0	0	13,036	
09/15/2023	Ground Water: Well Avg	4.10	Acre Inches		2.90			mg/L		191	0	0	12,576	
12/05/2023	Harvest	23.90	Tons	69.90	1.33	0.30	1.54	%						13,587
Acre Inches Applied:		31.30		Totals:					568	12,731	4,963	9,538	96,010	13,587
Season Nitrogen Ratio:		0.94		Lbs Per Acre:						179	70	134	1,352	191

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C8

Wheat, 69 Acres Planted on 11/28/2022

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							
10/08/2022	Corral Solids: Main Corral	5.50	Tons	38.50	2.73	0.77	3.46	%	380		12,743	3,599	16,151	0	
10/18/2022	Ground Water: Well Avg	4.30	Acre Inches		4.77			mg/L			320	0	0	14,582	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			966				
01/20/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90			mg/L			217	0	0	14,309	
02/28/2023	Ground Water: Well Avg	4.60	Acre Inches		2.90			mg/L			208	0	0	13,713	
04/20/2023	Ground Water: Well Avg	4.50	Acre Inches		2.90			mg/L			204	0	0	13,414	
05/15/2023	Harvest	19.50	Tons	66.20	1.32	0.22	0.82	%							12,006
Acre Inches Applied:		18.20							Totals:	380	14,658	3,599	16,151	56,018	12,006
Season Nitrogen Ratio:		1.22							Lbs Per Acre:		212	52	234	812	174

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C9

Wheat, 76 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								
09/15/2022	Corral Solids: Main Corral	5.50	Tons	38.50	2.73	0.77	3.46	%	418		14,036	3,964	17,789	0		
10/01/2022	Ground Water: Well Avg	4.50	Acre Inches		4.77			mg/L			369	0	0	16,808		
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,064					
01/28/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90			mg/L			239	0	0	15,761		
02/20/2023	Ground Water: Well Avg	4.60	Acre Inches		2.90			mg/L			230	0	0	15,104		
04/18/2023	Ground Water: Well Avg	4.90	Acre Inches		2.90			mg/L			244	0	0	16,089		
05/12/2023	Harvest	18.70	Tons	63.20	1.26	0.33	0.86	%							13,180	
Acre Inches Applied:		18.80							Totals:	418		16,182	3,964	17,789	63,762	13,180
Season Nitrogen Ratio:		1.23							Lbs Per Acre:			213	52	234	839	173

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C9

Milo, 76 Acres Planted on 07/15/2023

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)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
05/23/2023	Corral Solids: Main Corral	8.00	Tons	55.10	2.21	0.97	1.87	%	608		12,067	5,312	10,210	0	
06/05/2023	Ground Water: Well Avg	4.50	Acre Inches		2.90			mg/L			224	0	0	14,775	
06/20/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90			mg/L			239	0	0	15,761	
08/01/2023	Ground Water: Well Avg	4.75	Acre Inches		2.90			mg/L			237	0	0	15,597	
08/12/2023	Ground Water: Well Avg	4.90	Acre Inches		2.90			mg/L			244	0	0	16,089	
08/29/2023	Ground Water: Well Avg	4.30	Acre Inches		2.90			mg/L			214	0	0	14,119	
09/09/2023	Ground Water: Well Avg	4.60	Acre Inches		2.90			mg/L			230	0	0	15,104	
10/01/2023	Ground Water: Well Avg	4.25	Acre Inches		2.90			mg/L			212	0	0	13,954	
10/25/2023	Harvest	22.60	Tons	72.70	1.67	0.33	1.93	%							15,661
Acre Inches Applied:		32.10		Totals:					608		13,667	5,312	10,210	105,399	15,661
Season Nitrogen Ratio:		0.87		Lbs Per Acre:							180	70	134	1,387	206

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C10

Corn, 76 Acres Planted on 04/10/2023

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.							
11/01/2022	Corral Solids: Main Corral	8.00	Tons	38.50	2.73	0.77	3.46	%	608	20,416	5,766	25,875	0	
11/20/2022	Ground Water: Well Avg	4.50	Acre Inches		4.77			mg/L		369	0	0	16,808	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%		1,064				
04/25/2023	Ground Water: Well Avg	5.00	Acre Inches		2.90			mg/L		249	0	0	16,418	
05/08/2023	Ground Water: Well Avg	5.20	Acre Inches		2.90			mg/L		259	0	0	17,074	
05/30/2023	Ground Water: Well Avg	5.50	Acre Inches		2.90			mg/L		274	0	0	18,059	
06/13/2023	Ground Water: Well Avg	5.25	Acre Inches		2.90			mg/L		261	0	0	17,238	
06/27/2023	Ground Water: Well Avg	5.40	Acre Inches		2.90			mg/L		269	0	0	17,731	
07/12/2023	Ground Water: Well Avg	5.10	Acre Inches		2.90			mg/L		255	0	0	16,746	
07/31/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90			mg/L		239	0	0	15,761	
08/14/2023	Harvest	31.00	Tons	68.00	1.38	0.23	1.29	%						20,808
Acre Inches Applied:		40.75						Totals:	608	23,657	5,766	25,875	135,835	20,808
Season Nitrogen Ratio:		1.14						Lbs Per Acre:		311	76	340	1,787	274

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C11

Wheat, 80 Acres Planted on 11/21/2022

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								
10/11/2022	Corral Solids: Main Corral	5.00	Tons	38.50	2.73	0.77	3.46	%	400		13,431	3,794	17,023	0		
10/30/2022	Ground Water: Well Avg	4.50	Acre Inches		4.77			mg/L			389	0	0	17,693		
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,120					
02/01/2023	Ground Water: Well Avg	4.75	Acre Inches		2.90			mg/L			250	0	0	16,418		
03/06/2023	Ground Water: Well Avg	4.30	Acre Inches		2.90			mg/L			226	0	0	14,862		
03/31/2023	Ground Water: Well Avg	4.90	Acre Inches		2.90			mg/L			257	0	0	16,936		
04/08/2023	Ground Water: Well Avg	4.20	Acre Inches		2.90			mg/L			221	0	0	14,516		
05/15/2023	Harvest	17.60	Tons	67.60	1.40	0.22	0.89	%							12,774	
Acre Inches Applied:		22.65							Totals:	400		15,893	3,794	17,023	80,424	12,774
Season Nitrogen Ratio:		1.24							Lbs Per Acre:			199	47	213	1,005	160

K & M Visser 2023

Nutrient Applications (Attachment B)

Field Name: C11

Milo, 80 Acres Planted on 06/23/2023

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	10.00	Tons	55.10	2.21	0.97	1.87	%	800		15,877	6,990	13,434	0		
05/30/2023	Ground Water: Well Avg	4.80	Acre Inches		2.90			mg/L			252	0	0	16,590		
07/04/2023	Ground Water: Well Avg	5.10	Acre Inches		2.90			mg/L			268	0	0	17,627		
07/29/2023	Ground Water: Well Avg	5.30	Acre Inches		2.90			mg/L			278	0	0	18,318		
08/28/2023	Ground Water: Well Avg	5.25	Acre Inches		2.90			mg/L			276	0	0	18,156		
09/22/2023	Ground Water: Well Avg	5.40	Acre Inches		2.90			mg/L			283	0	0	18,664		
10/06/2023	Ground Water: Well Avg	5.20	Acre Inches		2.90			mg/L			273	0	0	17,973		
10/25/2023	Harvest	23.50	Tons	74.50	1.46	0.29	1.56	%							13,998	
Acre Inches Applied:		31.05							Totals:	800	17,507	6,990	13,434	107,329	13,998	
Season Nitrogen Ratio:		1.25							Lbs Per Acre:			219	87	168	1,342	175

K & M Visser 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	284,592.78	92,971.70	327,088.39	0.00	10,119.50	tons
Process Wastewater	148,017.39	33,841.34	147,236.67	1,025,167.15	33,933,099.45	gallons
Irrigation Water	43,782.86					
Fertilizer / Total Imports	0.00					
Atmospheric Deposition	21,588.00					
Total Nitrogen Applied	497,981.03					
Crop Nitrogen Removal	471,806.01					
Nitrogen Balance	26,175.02					
Nitrogen Ratio	1.06					

- ▣ 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.



K & M Visser 2023 Nutrient Applications (Attachment B)

FIELD NITROGEN RATIO Calculation:

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

ATMOSHERIC DEPOSITION Applied (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

K & M Visser 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)**
7,975	202,118.40	84,154.75	237,948.48	0.00

* 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.



K & M Visser 2023
Land Application Area Description Technical Report (Attachment D)

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
1	x313 x150 x026 xxxx	74	Both
2	x313 x150 x026 xxxx	75	Process Wastewater
3	x313 x150 x024 xxxx	75	Both
4	x313 x150 x024 xxxx	74	Process Wastewater
5	x313 x150 x024 xxxx	78	Manure
6	x313 x150 x024 xxxx	78	Both
7	x313 x150 x025 xxxx, x313 x150 x026 xxxx	103	Process Wastewater
8	x313 x150 x024 xxxx	71	Process Wastewater
9	x313 x150 x024 xxxx	76	Both
C1	x293 x150 x009 xxxx	79	Manure
C2	x293 x150 x009 xxxx	75	Both
C3	x293 x150 x016 xxxx, x293 x150 x017 xxxx	81	Manure
C4	x293 x150 x016 xxxx, x293 x150 x017 xxxx	81	Both
C5	x293 x150 x009 xxxx	79	Manure
C6	x293 x150 x009 xxxx	71	Manure
C7	x293 x150 x016 xxxx	71	Manure
C8	x293 x150 x016 xxxx	69	Manure
C9	x293 x160 x005 xxxx, x293 x160 x006 xxxx	76	Manure
C10	x293 x160 x026 xxxx	76	Manure
C11	x293 x160 x026 xxxx	80	Manure
		1,542	

Production Area APN(s): x313 x150 x026 xxxx

K & M Visser 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
03/09/2023	421.00	111.00	651.00	5,180	163.00		3,440.00							
06/16/2023	523.00	127.00	596.00	5,050	225.00	0.00	3,350.00	7.46						
07/10/2023	714.00	154.00	370.00	5,810	253.00		3,860.00							
11/01/2023	299.00	46.70	429.00	4,510	293.00		2,990.00							
Averages:	489.25	109.68	511.50	5,138	233.50	0.00	3,410.00	7.46						

Manure - Corral Solids

(Dry Weight Basis)

Sample Date:	TN	TP	TK	Moisture	Ash	CA	MG	NA	S	CL
06/14/2023	2.21	0.97	1.87	55.10					%	
11/01/2023	2.20	0.92	2.59	42.40					%	
Averages:	2.20	0.94	2.23	48.75						

Plant Tissue

(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
1	1	Wheat	05/13/2023	32.40	8.60	30.60	67.30	9.09
1	2	Milo	12/06/2023	28.20	6.00	35.80	72.60	10.50



K & M Visser 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 (%)
2	1	Corn		8.40	1.60	6.80		BV-W
3	1	Wheat	05/12/2023	26.40	6.60	21.80	67.70	6.65
3	2	Milo	12/06/2023	32.20	6.60	46.00	73.00	10.80
4	1	Wheat		11.00	1.70	8.30		BV-C
5	1	Corn	08/07/2023	24.00	5.40	28.80	69.40	5.39
6	1	Wheat	05/14/2023	31.40	5.80	27.60	70.20	7.47
6	2	Milo	12/05/2023	25.80	5.00	32.40	72.20	11.20
7	1	Corn	08/07/2023	27.20	6.40	28.60	72.70	5.84
8	1	Corn	08/07/2023	25.80	4.80	30.00	69.50	5.40
9	1	Wheat	05/13/2023	34.40	7.20	27.40	70.70	8.88
9	2	Milo	12/05/2023	28.80	6.20	33.00	73.90	11.00
C1	1	Corn	08/13/2023	28.00	5.60	32.60	70.40	6.95
C2	1	Wheat	05/14/2023	18.00	4.20	12.80	64.10	5.74
C2	2	Corn	08/14/2023	31.80	5.80	32.00	66.60	6.20
C3	1	Wheat	05/12/2023	23.00	6.00	18.20	62.70	5.91
C3	2	Milo	12/06/2023	25.80	5.20	31.00	71.20	10.10
C4	1	Wheat	05/11/2023	31.40	6.80	36.00	70.00	8.17
C4	2	Corn	08/07/2023	25.20	4.60	27.40	69.50	5.11



K & M Visser 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 (%)
C5	1	Wheat	05/13/2023	27.40	6.00	19.60	67.40	9.86
C5	2	Milo	12/05/2023	28.40	6.40	34.60	73.90	10.40
C6	1	Wheat	05/12/2023	27.40	7.20	22.00	66.40	7.22
C7	1	Wheat	05/12/2023	23.60	5.80	17.80	61.00	5.89
C7	2	Milo	12/05/2023	26.60	6.00	30.80	69.90	10.80
C8	1	Wheat	05/15/2023	26.40	4.40	16.40	66.20	4.14
C9	1	Wheat	05/12/2023	25.20	6.60	17.20	63.20	6.49
C9	2	Milo	10/25/2023	33.40	6.60	38.60	72.70	10.20
C10	1	Corn	08/14/2023	27.60	4.60	25.80	68.00	5.78
C11	1	Wheat	05/15/2023	28.00	4.40	17.80	67.60	5.77
C11	2	Milo	10/25/2023	29.20	5.80	31.20	74.50	10.50

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-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	CL
Dairy	D-1	Out of Service						Out of service						

K & M Visser 2023
Lab Results Summary (Attachment E)

Well / Irrigation Water

(mg/l/ppm unless noted otherwise)

	Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	CA	MG	NA	HCO3	CO3	SO4	CL	General Minerals
Dairy															
D-2		Out of Service						Out of service							
Averages:															
Domestic															
7AD		Out of Service						Out of service							
7BD	12/18/2023	3.60		437		290.00		37.00	3.00	47.00	130.00	0.00	10.50	47.00	
D-3	12/18/2023	0.40		226											
Domestic	12/18/2023	0.70		225											
Averages:		1.57		296		290.00		37.00	3.00	47.00	130.00	0.00	10.50	47.00	

K & M Visser 2023
Lab Results Summary (Attachment E)

Well / Irrigation Water

(mg/l/ppm unless noted otherwise)

	Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	General Minerals					
								CA	MG	NA	HCO3	CO3	SO4
Irrigation													
7W	Out of Service							Out of service					
C9	08/16/2023	1.30		211		150.00	1.30						
CW1	Out of Service							Out of service					
CW2	12/05/2023	4.10		307		180.00	4.10						
CW3	12/05/2023	3.10		252		130.00	3.10						
CW6	08/16/2023	2.00		240		150.00	2.00						
CW8	08/16/2023	3.80		311		200.00	3.80						
CW10	12/05/2023	9.90		591		300.00	9.90	51.00	5.00	54.00	150.00	0.00	11.40
CW11	12/05/2023	2.20		259		130.00	2.20	7.00	0.00	46.00	70.00	0.00	5.30
CW1a								Did not Run					
Deep Well	12/05/2023	0.00		178		110.00	0.00						
W1	11/30/2023	1.50		200		290.00	1.50						
W5								Did not Run					
W9	Out of Service							Out of service					
W10	11/30/2023	1.10		207		270.00	1.10						
Averages:		2.90		276		191.00	2.90	29.00	2.50	50.00	110.00	0.00	8.35
													44.00

* NH4N was non-detectable unless a value is shown



K & M Visser 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	Wheat	74	10/31/2022	05/13/2023	17.9	1280.2	17.3
	2	Milo	74	06/27/2023	12/06/2023	25.0	1931.4	26.1
Field: 2								
	1	Corn	75	04/09/2023	07/20/2023	28.6	2085.0	27.8
Field: 3								
	1	Wheat	75	11/30/2022	05/12/2023	17.2	1365.0	18.2
	2	Milo	75	06/28/2023	12/06/2023	24.3	1920.0	25.6
Field: 4								
	1	Wheat	74	11/18/2022	05/15/2023	17.5	1383.8	18.7
Field: 5								
	1	Corn	78	04/17/2023	08/07/2023	29.0	2347.8	30.1
Field: 6								
	1	Wheat	78	11/29/2022	05/14/2023	20.0	1427.4	18.3
	2	Milo	78	06/21/2023	12/05/2023	24.8	2035.8	26.1
Field: 7								
	1	Corn	103	04/15/2023	08/07/2023	30.2	3296.0	32.0
Field: 8								
	1	Corn	71	04/28/2023	08/07/2023	30.1	2286.2	32.2
Field: 9								
	1	Wheat	76	11/01/2022	05/13/2023	17.9	1459.2	19.2
	2	Milo	76	06/22/2023	12/05/2023	24.9	1953.2	25.7
Field: C1								
	1	Corn	79	04/24/2023	08/13/2023	30.2	2488.5	31.5



K & M Visser 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: C2								
	1	Wheat	75	11/22/2022	05/14/2023	17.7	1417.5	18.9
	2	Corn	75	05/16/2023	08/14/2023	28.1	2257.5	30.1
Field: C3								
	1	Wheat	81	11/03/2022	05/12/2023	19.2	1660.5	20.5
	2	Milo	81	06/26/2023	12/06/2023	23.4	1846.8	22.8
Field: C4								
	1	Wheat	81	11/01/2022	05/11/2023	18.7	1571.4	19.4
	2	Corn	81	05/13/2023	08/07/2023	26.9	2025.0	25.0
Field: C5								
	1	Wheat	79	11/19/2022	05/13/2023	19.0	1469.4	18.6
	2	Milo	79	06/24/2023	12/05/2023	23.9	1797.2	22.8
Field: C6								
	1	Wheat	71	11/02/2022	05/12/2023	18.4	1242.5	17.5
Field: C7								
	1	Wheat	71	11/04/2022	05/12/2023	19.0	1434.2	20.2
	2	Milo	71	06/20/2023	12/05/2023	25.4	1696.9	23.9
Field: C8								
	1	Wheat	69	11/28/2022	05/15/2023	18.7	1345.5	19.5
Field: C9								
	1	Wheat	76	11/05/2022	05/12/2023	19.1	1421.2	18.7
	2	Milo	76	07/15/2023	10/25/2023	23.5	1717.6	22.6
Field: C10								
	1	Corn	76	04/10/2023	08/14/2023	30.2	2356.0	31.0



K & M Visser 2023
Planting and Harvest Information (Attachment F)

Field:	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
	1	Wheat	80	11/21/2022	05/15/2023	18.5	1408.0	17.6
	2	Milo	80	06/23/2023	10/25/2023	24.7	1880.0	23.5



K & M Visser 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





November 15, 2023

Lab No. : VI 2345473**Customer No.** : 4018573**Reference** : 41219

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

Laboratory Report

Introduction: This report package contains a total of 5 pages divided into 3 sections:

- | | | |
|-----------------|-----------|---|
| Case Narrative | (1 page) | : An overview of the work performed at FGL. |
| Sample Results | (3 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
CW8	08/16/2023	08/16/2023	VI 2345473-001	AGW
CW6	08/16/2023	08/16/2023	VI 2345473-002	AGW
C9	08/16/2023	08/16/2023	VI 2345473-003	AGW

Sampling and Receipt Information:

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

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

Test Summary

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

Discussion of Analytical Results:

Amended per client to correct description on sample 3.

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: 2023-11-15

Section: Case Narrative

Page 1 of 5

Amended

Page 1 of 5

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

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

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

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

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



November 15, 2023

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

Description : CW8
 Project : 0021 K & M Visser

Lab No. : VI 2345473-001
 Customer No.: 4018573
 Reference : 41219
 Sampled On : August 16, 2023 at 12:14
 Sampled By : Frank
 Received On : August 16, 2023 at 16:05
 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	08/30/2023	08:34	sta	EPA 351.2	09/05/2023	19:43	lcr
Nitrate Nitrogen	3.8	0.4	mg/L		1		08/17/2023	13:00	lfs	SM 4500-NO3 F	08/17/2023	15:07	lfs
Nitrogen, Total as Nitrogen	3.8	0.5	mg/L		1	1	08/30/2023	08:34	sta	Calc.	09/05/2023	19:43	lcr
Nitrate + Nitrite as N	3.8	0.4	mg/L		1		08/17/2023	13:00	lfs	SM 4500-NO3 F	08/17/2023	15:07	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	08/30/2023	08:34	sta	EPA 351.2	09/05/2023	19:43	lcr
Conductivity	311	1	umhos/cm		1		08/22/2023	15:45	amm	SM 4500-H+B	08/22/2023	17:25	amm
Solids, Total Dissolved (TDS)	200	20	mg/L		1		08/18/2023	11:45	ctl	SM 2540 C	08/21/2023	12:00	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

Corporate Offices & Laboratory	Office & Laboratory	Office & Laboratory	Office & Laboratory	Office & 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	2500 Stagecoach Road Stockton, CA 95215 TEL: (209)942-0182 FAX: (209)942-0423 CA ELAP Certification No. 1563	563 E. Lindo Avenue Chico, CA 95926 TEL: (530)343-5818 FAX: (530)343-3807 CA ELAP Certification No. 1563	3442 Empressa Drive, Suite D San Luis Obispo, CA 93401 TEL: (805)783-2940 FAX: (805)783-2912 CA ELAP Certification No. 2670	9415 W. Goshen Avenue Visalia, CA 93291 TEL: (559)734-9473 FAX: (559)734-8435 CA ELAP Certification No. 2775



November 15, 2023

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

Description : CW6
 Project : 0021 K & M Visser

Lab No. : VI 2345473-002
 Customer No.: 4018573
 Reference : 41219
 Sampled On : August 16, 2023 at 12:20
 Sampled By : Frank
 Received On : August 16, 2023 at 16:05
 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	08/30/2023	08:34	sta	EPA 351.2	09/05/2023	19:44	lcr
Nitrate Nitrogen	2.0	0.4	mg/L		1		08/17/2023	13:00	lfs	SM 4500-NO3 F	08/17/2023	15:09	lfs
Nitrogen, Total as Nitrogen	2.0	0.5	mg/L		1	1	08/30/2023	08:34	sta	Calc.	09/05/2023	19:44	lcr
Nitrate + Nitrite as N	2.0	0.4	mg/L		1		08/17/2023	13:00	lfs	SM 4500-NO3 F	08/17/2023	15:09	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	08/30/2023	08:34	sta	EPA 351.2	09/05/2023	19:44	lcr
Conductivity	240	1	umhos/cm		1		08/22/2023	15:45	amm	SM 4500-H+B	08/22/2023	17:30	amm
Solids, Total Dissolved (TDS)	150	20	mg/L		1		08/18/2023	11:45	ctl	SM 2540 C	08/21/2023	12:00	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



November 15, 2023

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

Description : C9
 Project : 0021 K & M Visser

Lab No. : VI 2345473-003
 Customer No.: 4018573
 Reference : 41219
 Sampled On : August 16, 2023 at 12:35
 Sampled By : Frank
 Received On : August 16, 2023 at 16:05
 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	08/30/2023	08:34	sta	EPA 351.2	09/05/2023	19:47	lcr
Nitrate Nitrogen	1.3	0.4	mg/L		1		08/17/2023	13:00	lfs	SM 4500-NO3 F	08/17/2023	15:12	lfs
Nitrogen, Total as Nitrogen	1.3	0.5	mg/L		1	I	08/30/2023	08:34	sta	Calc.	09/05/2023	19:47	lcr
Nitrate + Nitrite as N	1.3	0.4	mg/L		1		08/17/2023	13:00	lfs	SM 4500-NO3 F	08/17/2023	15:12	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	08/30/2023	08:34	sta	EPA 351.2	09/05/2023	19:47	lcr
Conductivity	211	1	umhos/cm		1		08/22/2023	15:45	amm	SM 4500-H+B	08/22/2023	17:02	amm
Solids, Total Dissolved (TDS)	150	20	mg/L		1		08/18/2023	11:45	ctl	SM 2540 C	08/21/2023	12:00	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



November 15, 2023

Innovative Ag Services, LLC

Lab No. : VI 2345473

Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(SP 2314332-003) (VI 2345472-003)	Dup Dup	umhos/cm umhos/cm		0% 0.4%	5 5	
Solids, Total Dissolved	2540CE	08/18/2023:209267CTL (SP 2314111-001) (SP 2314111-001)	Blank LCS Dup Dup	mg/L mg/L mg/L mg/L	991.5	ND 101% 0.04% 0.9%	<20 90-110 5 5	
Nitrogen, Total Kjeldahl	351.2	08/30/2023:209713STA (STK2351326-005) (CH 2376855-001)	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 97.1% 88.0% 87.1% 1.0% 90.3% 90.1% 0.3%	<0.5 73-124 90-110 435 90-110 435 ≤20 90-110 90-110 ≤20	
Nitrate + Nitrite as N	4500NO3F	08/17/2023:209186LFS (VI 2345438-001)	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 99.7% 102% 104% 2.2%	<0.4 80-120 66-125 66-125 ≤30.4	
Nitrate Nitrogen	4500NO3F	08/17/2023:209186LFS (VI 2345438-001)	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 99.7% 102% 104% 2.2%	<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 41219

ID: # 0021

2345473

SITE NAME: K & M VISSERBilling: IAS**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: _____

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH ₃ N *	pH	Temp
1 CW8	Irr	W2	8/16 12:14	Frank	—		
2 CW6	I	I	12:20	I	—		
3 CW1	I	I	12:35	I	—		
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: 7.4°C ROI

ID# TH407

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st	<u>CG</u>	IAS		8/16/23 2:00
2nd	<u>SG</u>	FGL	8-16-23 15:45	
3rd	<u>SG</u>	FGL		8-16-23 16:05
4th	<u>CG</u>	FGL	8-16-2023 16:05	

LABORATORY USE ONLY
Tagged In By: CG Date: 8-16-2023 17:30

Total Samples: _____

Laboratory #: _____

GLS inc 8/17/23 12:30



December 18, 2023

Lab No. : VI 2348036
Customer No. : 4018573
Reference : 42102

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

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
W1	11/30/2023	11/30/2023	VI 2348036-001	AGW
W10	11/30/2023	11/30/2023	VI 2348036-002	AGW

Sampling and Receipt Information:

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

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

Test Summary

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

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

KD: 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 : W1
 Project : 0021 K & M Visser

Lab No. : VI 2348036-001
 Customer No.: 4018573
 Reference : 42102
 Sampled On : November 30, 2023 at 13:30
 Sampled By : Zeke
 Received On : November 30, 2023 at 16:10
 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	12/07/2023	10:45	sta	EPA 351.2	12/08/2023	15:03	lfs
Nitrate Nitrogen	1.5	0.4	mg/L		1		12/01/2023	12:15	lfs	SM 4500-NO3 F	12/01/2023	14:15	lfs
Nitrogen, Total as Nitrogen	1.5	0.5	mg/L		1	I	12/07/2023	10:45	sta	Calc.	12/08/2023	15:03	lfs
Nitrate + Nitrite as N	1.5	0.4	mg/L		1		12/01/2023	12:15	lfs	SM 4500-NO3 F	12/01/2023	14:15	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	12/07/2023	10:45	sta	EPA 351.2	12/08/2023	15:03	lfs
Conductivity	200	1	umhos/cm		1		12/07/2023	07:47	krh	SM 4500-H+B	12/07/2023	12:14	krh
Solids, Total Dissolved (TDS)	290	20	mg/L		1		12/04/2023	11:50	ctl	SM 2540 C	12/05/2023	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



December 18, 2023

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

Description : W10
 Project : 0021 K & M Visser

Lab No. : VI 2348036-002
 Customer No.: 4018573
 Reference : 42102
 Sampled On : November 30, 2023 at 13:45
 Sampled By : Zeke
 Received On : November 30, 2023 at 16:10
 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	12/07/2023	10:45	sta	EPA 351.2	12/08/2023	14:34	lfs
Nitrate Nitrogen	1.1	0.4	mg/L		1		12/01/2023	12:15	lfs	SM 4500-NO3 F	12/01/2023	14:18	lfs
Nitrogen, Total as Nitrogen	1.1	0.5	mg/L		1	1	12/07/2023	10:45	sta	Calc.	12/08/2023	14:34	lfs
Nitrate + Nitrite as N	1.1	0.4	mg/L		1		12/01/2023	12:15	lfs	SM 4500-NO3 F	12/01/2023	14:18	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	12/07/2023	10:45	sta	EPA 351.2	12/08/2023	14:34	lfs
Conductivity	207	1	umhos/cm		1		12/07/2023	07:47	krh	SM 4500-H+B	12/07/2023	12:28	krh
Solids, Total Dissolved (TDS)	270	20	mg/L		1		12/04/2023	11:50	ctl	SM 2540 C	12/05/2023	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



December 18, 2023
Innovative Ag Services, LLC

Lab No. : VI 2348036
 Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2348057-001)	Dup	umhos/cm		0.3%	5	
Solids, Total Dissolved	2540CE	12/04/2023:213647CTL (CH 2379819-008) (CH 2379819-008)	Blank LCS Dup Dup	mg/L mg/L mg/L mg/L	991.5	ND 104% 0.6% 2.02%	<20 90-110 5 5	
Nitrogen, Total Kjeldahl	351.2	12/07/2023:213790STA (VI 2348036-002) (STK2356291-001)	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 92.4% 85.7% 82.9% 3.3% 86.4% 84.6% 2.0%	<0.5 73-124 90-110 435 90-110 435 ≤20 90-110 435 90-110 435 ≤20	
Nitrate + Nitrite as N	4500NO3F	12/01/2023:213604LFS (SP 2319794-001)	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 95.1% 92.4% 92.9% 0.3%	<0.4 80-120 66-125 66-125 ≤30.4	
Nitrate Nitrogen	4500NO3F	12/01/2023:213604LFS (SP 2319794-001)	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 95.1% 92.4% 92.9% 0.3%	<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 42102

ID: # 0021SITE NAME: KEM VISSCHERBilling: TAS2348036LABORATORY: FCL

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 NH₄-N (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 Tissue
P1 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: _____

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH ₃ N *	pH	Temp
1	W1	TAS	W2 11:30 / 1:30	Zake			
2	W1b	IRR	W2 11:30 / 1:45	Zake			
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:

G15 12/11/23

CDA

1143

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 st	<u>JAS</u>	TAS		11-30-23 / 3:15
2 nd	<u>ASB</u>	FCL	11/30/23 1550	
3 rd	<u>ASB</u>	FCL		11/30/23 1610
4 th	<u>ZT</u>		11/30/23 1610	

LABORATORY USE ONLY

Logged In By: EJLTotal Samples: 120/09Laboratory #: 1143



December 18, 2023

Lab No. : VI 2348213
Customer No. : 4018573
Reference : 42131

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

Laboratory Report

Introduction: This report package contains a total of 9 pages divided into 3 sections:

- | | | |
|-----------------|-----------|---|
| Case Narrative | (1 page) | : An overview of the work performed at FGL. |
| Sample Results | (5 pages) | : Results for each sample submitted. |
| Quality Control | (3 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
CW2	12/05/2023	12/05/2023	VI 2348213-001	AGW
CW3	12/05/2023	12/05/2023	VI 2348213-002	AGW
Deep Well	12/05/2023	12/05/2023	VI 2348213-003	AGW
CW10	12/05/2023	12/05/2023	VI 2348213-004	AGW
CW11	12/05/2023	12/05/2023	VI 2348213-005	AGW

Sampling and Receipt Information:

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

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

Test Summary

EPA 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-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

Section: Case Narrative

Page 1 of 9

Page 1 of 9

Corporate Offices & Laboratory 853 Corporation Street Santa Paula, CA 93060 TEL: (805)392-2000 Env FAX: (805)525-4172 / Ag FAX: (805)392-2063 CA ELAP Certification No. 1573	Office & Laboratory 2500 Stagecoach Road Stockton, CA 95215 TEL: (209)942-0182 FAX: (209)942-0423	Office & Laboratory 563 E. Lindo Avenue Chico, CA 95926 TEL: (530)343-5818 FAX: (530)343-3807	Office & Laboratory 3442 Empresa Drive, Suite D San Luis Obispo, CA 93401 TEL: (805)783-2940 FAX: (805)783-2912	Office & Laboratory 9415 W. Goshen Avenue Visalia, CA 93291 TEL: (559)734-8473 FAX: (559)734-8435
	CA ELAP Certification No. 1563		CA ELAP Certification No. 2670	CA ELAP Certification No. 2775



December 18, 2023

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

Description : CW2
 Project : 0021 K&M Visser

Lab No. : VI 2348213-001
 Customer No.: 4018573
 Reference : 42131
 Sampled On : December 5, 2023 at 10:50
 Sampled By : Zeke
 Received On : December 5, 2023 at 15:46
 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	12/14/2023	07:10	lcr	EPA 351.2	12/17/2023	17:45	lcr
Nitrate Nitrogen	4.1	0.4	mg/L		1		12/06/2023	14:00	lfs	SM 4500-NO3 F	12/06/2023	16:39	lfs
Nitrogen, Total as Nitrogen	4.1	0.5	mg/L		1	1	12/14/2023	07:10	lcr	Calc.	12/17/2023	17:45	lcr
Nitrate + Nitrite as N	4.1	0.4	mg/L		1		12/06/2023	14:00	lfs	SM 4500-NO3 F	12/06/2023	16:39	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	12/14/2023	07:10	lcr	EPA 351.2	12/17/2023	17:45	lcr
Conductivity	307	1	umhos/cm		1		12/08/2023	10:31	krh	SM 4500-H+B	12/08/2023	13:26	krh
Solids, Total Dissolved (TDS)	180	20	mg/L		1		12/07/2023	10:15	ctl	SM 2540 C	12/08/2023	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



December 18, 2023

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

Description : CW3
 Project : 0021 K&M Visser

Lab No. : VI 2348213-002
 Customer No.: 4018573
 Reference : 42131
 Sampled On : December 5, 2023 at 11:00
 Sampled By : Zeke
 Received On : December 5, 2023 at 15:46
 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	12/14/2023	07:10	lcr	EPA 351.2	12/17/2023	18:15	lcr
Nitrate Nitrogen	3.1	0.4	mg/L		1		12/06/2023	14:00	lfs	SM 4500-NO3 F	12/06/2023	16:40	lfs
Nitrogen, Total as Nitrogen	3.1	0.5	mg/L		1	1	12/14/2023	07:10	lcr	Calc.	12/17/2023	18:15	lcr
Nitrate + Nitrite as N	3.1	0.4	mg/L		1		12/06/2023	14:00	lfs	SM 4500-NO3 F	12/06/2023	16:40	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	12/14/2023	07:10	lcr	EPA 351.2	12/17/2023	18:15	lcr
Conductivity	252	1	umhos/cm		1		12/08/2023	10:31	krh	SM 4500-H+B	12/08/2023	13:14	krh
Solids, Total Dissolved (TDS)	130	20	mg/L		1		12/07/2023	10:15	ctl	SM 2540 C	12/08/2023	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

Corporate Offices & Laboratory

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

Office & Laboratory

2500 Stagecoach Road
 Stockton, CA 95215
 TEL: (209)942-0182
 FAX: (209)942-0423

Office & Laboratory

563 E. Lindo Avenue
 Chico, CA 95926
 TEL: (530)343-5818
 FAX: (530)343-3807

Office & Laboratory

3442 Empresa Drive, Suite D
 San Luis Obispo, CA 93401
 TEL: (805)783-2940
 FAX: (805)783-2912

Office & Laboratory

9415 W. Goshen Avenue
 Visalia, CA 93291
 TEL: (559)734-9473
 FAX: (559)734-8435

CA ELAP Certification No. 2810



December 18, 2023

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

Description : Deep Well
 Project : 0021 K&M Visser

Lab No. : VI 2348213-003
 Customer No.: 4018573
 Reference : 42131
 Sampled On : December 5, 2023 at 11:05
 Sampled By : Zeke
 Received On : December 5, 2023 at 15:46
 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	12/14/2023	07:10	lcr	EPA 351.2	12/17/2023	18:20	lcr
Nitrate Nitrogen	ND	0.4	mg/L		1	U	12/06/2023	14:00	lfs	SM 4500-NO3 F	12/06/2023	16:43	lfs
Nitrogen, Total as Nitrogen	ND	0.5	mg/L		1	U1	12/14/2023	07:10	lcr	Calc.	12/17/2023	18:20	lcr
Nitrate + Nitrite as N	ND	0.4	mg/L		1	U	12/06/2023	14:00	lfs	SM 4500-NO3 F	12/06/2023	16:43	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U1	12/14/2023	07:10	lcr	EPA 351.2	12/17/2023	18:20	lcr
Conductivity	178	1	umhos/cm		1		12/08/2023	10:31	krh	SM 4500-H+B	12/08/2023	13:02	krh
Solids, Total Dissolved (TDS)	110	20	mg/L		1		12/07/2023	10:15	ctl	SM 2540 C	12/08/2023	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



December 18, 2023

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

Description : CW10
 Project : 0021 K&M Visser

Lab No. : VI 2348213-004
 Customer No.: 4018573
 Reference : 42131
 Sampled On : December 5, 2023 at 10:40
 Sampled By : Zeke
 Received On : December 5, 2023 at 15:46
 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													
Alkalinity (as CaCO ₃)	130	10	mg/L		1		12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	06:09	amm
Bicarbonate	150	10	mg/L		1		12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	06:09	amm
Carbonate	ND	10	mg/L		1	U	12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	06:09	amm
Hydroxide	ND	10	mg/L		1	U	12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	06:09	amm
Chloride	61	1	mg/L		1		12/06/2023	11:50	ldm	EPA 300.0	12/06/2023	21:02	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	UL	12/14/2023	07:10	lcr	EPA 351.2	12/17/2023	18:01	lcr
Nitrate Nitrogen	9.9	0.1	mg/L		1		12/06/2023	11:50	ldm	EPA 300.0	12/06/2023	21:02	ldm
Nitrogen, Total as Nitrogen	9.9	0.5	mg/L		1	1	12/14/2023	07:10	lcr	Calc.	12/17/2023	18:01	lcr
Nitrate + Nitrite as N	9.9	0.1	mg/L		1		12/06/2023	11:50	ldm	EPA 300.0	12/06/2023	21:02	ldm
Kjeldahl Nitrogen	ND	0.5	mg/L		1	UL	12/14/2023	07:10	lcr	EPA 351.2	12/17/2023	18:01	lcr
Conductivity	591	1	umhos/cm		1		12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	06:09	amm
Sulfate Sulfur	11.4	0.17	mg/L		1		12/06/2023	11:50	ldm	EPA 300.0	12/06/2023	21:02	ldm
Solids, Total Dissolved (TDS)	300	20	mg/L		1		12/07/2023	10:00	ctl	SM 2540 C	12/08/2023	11:00	ctl
Calcium	51	1	mg/L		1		12/07/2023	07:15	ejc	EPA 200.7	12/08/2023	21:04	ac
Magnesium	5	1	mg/L		1		12/07/2023	07:15	ejc	EPA 200.7	12/08/2023	21:04	ac
Sodium	54	1	mg/L		1		12/07/2023	07:15	ejc	EPA 200.7	12/08/2023	21:04	ac

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



December 18, 2023

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

Description : CW11
 Project : 0021 K&M Visser

Lab No. : VI 2348213-005
 Customer No.: 4018573
 Reference : 42131
 Sampled On : December 5, 2023 at 10:30
 Sampled By : Zeke
 Received On : December 5, 2023 at 15:46
 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													
Alkalinity (as CaCO ₃)	60	10	mg/L		1		12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	04:52	amm
Bicarbonate	70	10	mg/L		1		12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	04:52	amm
Carbonate	ND	10	mg/L		1	U	12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	04:52	amm
Hydroxide	ND	10	mg/L		1	U	12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	04:52	amm
Chloride	27	1	mg/L		1		12/06/2023	11:50	ldm	EPA 300.0	12/06/2023	21:23	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	12/14/2023	07:10	lcr	EPA 351.2	12/17/2023	17:54	lcr
Nitrate Nitrogen	2.2	0.1	mg/L		1		12/06/2023	11:50	ldm	EPA 300.0	12/06/2023	21:23	ldm
Nitrogen, Total as Nitrogen	2.2	0.5	mg/L		1	1	12/14/2023	07:10	lcr	Calc.	12/17/2023	17:54	lcr
Nitrate + Nitrite as N	2.2	0.1	mg/L		1		12/06/2023	11:50	ldm	EPA 300.0	12/06/2023	21:23	ldm
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	12/14/2023	07:10	lcr	EPA 351.2	12/17/2023	17:54	lcr
Conductivity	259	1	umhos/cm		1		12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	04:52	amm
Sulfate Sulfur	5.3	0.17	mg/L		1		12/06/2023	11:50	ldm	EPA 300.0	12/06/2023	21:23	ldm
Solids, Total Dissolved (TDS)	130	20	mg/L		1		12/07/2023	10:00	ctl	SM 2540 C	12/08/2023	11:00	ctl
Calcium	7	1	mg/L		1		12/07/2023	07:15	ejc	EPA 200.7	12/08/2023	20:58	ac
Magnesium	ND	1	mg/L		1	U	12/07/2023	07:15	ejc	EPA 200.7	12/08/2023	20:58	ac
Sodium	46	1	mg/L		1		12/07/2023	07:15	ejc	EPA 200.7	12/08/2023	20:58	ac

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



December 18, 2023
Innovative Ag Services, LLC

Lab No. : VI 2348213
 Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	12/07/2023:213815EJC	Blank	mg/L		ND	<1	
		(CC 2384296-003)	LCS	mg/L	12.00	91.5%	85-115	
			MS	mg/L	12.00	72.6%	<¼	406
			MSD	mg/L	12.00	115%	75-125	
			MSRPD	mg/L		7.1%	≤20.0	
		(CC 2384274-002)	MS	mg/L	12.00	126%	<¼	406
			MSD	mg/L	12.00	108%	75-125	
			MSRPD	mg/L		3.3%	≤20.0	
Magnesium	200.7	12/07/2023:213815EJC	Blank	mg/L		ND	<1	
		(CC 2384296-003)	LCS	mg/L	12.00	93.4%	85-115	
			MS	mg/L	12.00	76.9%	75-125	
			MSD	mg/L	12.00	114%	75-125	
			MSRPD	mg/L		6.6%	≤20	
		(CC 2384274-002)	MS	mg/L	12.00	123%	75-125	
			MSD	mg/L	12.00	105%	75-125	
			MSRPD	mg/L		3.7%	≤20	
Sodium	200.7	12/07/2023:213815EJC	Blank	mg/L		ND	<1	
		(CC 2384296-003)	LCS	mg/L	12.00	89.3%	85-115	
			MS	mg/L	12.00	82.9%	75-125	
			MSD	mg/L	12.00	108%	75-125	
			MSRPD	mg/L		4.3%	≤20.0	
		(CC 2384274-002)	MS	mg/L	12.00	129%	<¼	406
			MSD	mg/L	12.00	111%	75-125	
			MSRPD	mg/L		2.1%	≤20.0	

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.
- 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

- 406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.

December 18, 2023
Innovative Ag Services, LLC

Lab No. : VI 2348213
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO3)	2320B	12/10/2023:213906AMM	ND	mg/L		0.2%	10	406
Bicarbonate	2320B	(SP 2319949-001)	Dup	mg/L		0.2%	10	
E. C.	2320B	(VI 2348235-001)	Dup	umhos/cm		0.7%	5	
	2320B	(SP 2319949-001)	Dup	umhos/cm		0.1%	5	
Solids, Total Dissolved	2540CE	12/07/2023:213784CTL	Blank	mg/L		ND	<20	
		(STK2356558-002)	LCS	mg/L	991.5	99.1%	90-110	
		(STK2356558-002)	Dup	mg/L		1.01%	5	
		(CC 2384275-001)	Dup	mg/L		1.47%	5	
		(CC 2384275-001)	Blank	mg/L		ND	<20	
		(CC 2384275-001)	LCS	mg/L	991.5	97.8%	90-110	
		(CC 2384275-001)	Dup	mg/L		0.7%	5	
		(CC 2384275-001)	Dup	mg/L		0.3%	5	
Chloride	300.0	12/06/2023:213857LDM	Blank	mg/L		ND	<1	
		(VI 2347969-001)	LCS	mg/L	25.00	98.3%	90-110	
		(VI 2347969-001)	MS	mg/L	0.000	0.0%	<1/4	406
		(VI 2347969-001)	MSD	mg/L	0.000	0.0%	<1/4	
		(VI 2348000-001)	MSRPD	mg/L		0.0%	≤7	
		(VI 2348000-001)	MS	mg/L	0.000	0.0%	<1/4	406
		(VI 2348000-001)	MSD	mg/L	0.000	0.0%	<1/4	
		(VI 2348000-001)	MSRPD	mg/L		0.0%	≤7	
Nitrate + Nitrite as N	300.0	12/06/2023:213857LDM	Blank	mg/L		ND	<0.4	
		(VI 2347969-001)	LCS	mg/L	20.00	98.6%	90-110	
		(VI 2347969-001)	MS	mg/L	0.000	0.0%	<1/4	406
		(VI 2347969-001)	MSD	mg/L	0.000	0.0%	<1/4	
		(VI 2348000-001)	MSRPD	mg/L		0.0%	≤7	
		(VI 2348000-001)	MS	mg/L	0.000	0.0%	<1/4	406
		(VI 2348000-001)	MSD	mg/L	0.000	0.0%	<1/4	
		(VI 2348000-001)	MSRPD	mg/L		0.0%	≤7	
Nitrate Nitrogen	300.0	12/06/2023:213857LDM	Blank	mg/L		ND	<0.4	
		(VI 2347969-001)	LCS	mg/L	20.00	98.6%	90-110	
		(VI 2347969-001)	MS	mg/L	0.000	0.0%	<1/4	406
		(VI 2347969-001)	MSD	mg/L	0.000	0.0%	<1/4	
		(VI 2348000-001)	MSRPD	mg/L		0.0%	≤7	
		(VI 2348000-001)	MS	mg/L	0.000	0.0%	<1/4	406
		(VI 2348000-001)	MSD	mg/L	0.000	0.0%	<1/4	
		(VI 2348000-001)	MSRPD	mg/L		0.0%	≤7	
Sulfate Sulfur	300.0	12/06/2023:213857LDM	Blank	mg/L		ND	<0.5	
		(VI 2347969-001)	LCS	mg/L	50.00	99.9%	90-110	
		(VI 2347969-001)	MS	mg/L	0.000	0.0%	<1/4	406
		(VI 2347969-001)	MSD	mg/L	0.000	0.0%	<1/4	
		(VI 2348000-001)	MSRPD	mg/L		0.0%	≤7	
		(VI 2348000-001)	MS	mg/L	0.000	0.0%	<1/4	406
		(VI 2348000-001)	MSD	mg/L	0.000	0.0%	<1/4	
		(VI 2348000-001)	MSRPD	mg/L		0.0%	≤7	
Nitrogen, Total Kjeldahl	351.2	12/14/2023:214086LCR	Blank	mg/L		ND	<0.5	
		(VI 2348210-001)	LCS	mg/L	12.00	91.0%	73-124	
		(VI 2348210-001)	MS	mg/L	12.00	82.9%	<1/4	406
		(VI 2348210-001)	MSD	mg/L	12.00	86.4%	<1/4	
		(VI 2348210-001)	MSRPD	mg/L		4.2%	≤20	
		(VI 2348210-001)	MS	mg/L	12.00	85.6%	90-110	435

December 18, 2023
Innovative Ag Services, LLC

Lab No. : VI 2348213
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
		(VI 2348215-001)	MSD MSRPD	mg/L mg/L	12.00 1.5%	84.4% ND	90-110 <0.4	435 ≤20
Nitrate + Nitrite as N	4500NO3F	12/06/2023:213768LFS	Blank LCS MS (VI 2348202-001) MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	11.22 5.609 5.609 0.5%	92.6% 89.8% 90.7% ND	80-120 66-125 66-125 ≤30.4	
Nitrate Nitrogen	4500NO3F	12/06/2023:213768LFS	Blank LCS MS (VI 2348202-001) MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	11.22 5.609 5.609 0.5%	92.6% 89.8% 90.7% ND	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.
- 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

- 406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.
- 435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.



Laboratory Analysis Work Order

Nº 42131

ID: # 00212348213LABORATORY: FGLSITE NAME: KM VISSERBilling: DAS

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO₃N (Dom)W2 EC, NO₃N, TDS, TN (Irr)W3 NH₄-N (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: _____

Vol a/c DTKU01

Plant Tissue

P1 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: _____

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH ₃ N*	pH	Temp
1 CW2	INR	w2	12-5 / 10:50	Zek			
2 CW3		w2	11:00				
3 Deepwell		w2	11:05				
4 CW10		w5	10:40				
5 CW11		w5	10:30				
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: *GJS 12/10/23 CDA 1330*

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 st	<u>DAS</u>	<u>FGL</u>		12-5-23 / 3:10
2 nd	<u>EMA</u>	<u>FGL</u>	12/5/23 15:46	
3 rd	<u>EMA</u>	<u>FGL</u>		12/5/23 16:04
4 th	<u>DAS</u>		12/5/23 16:04	

LABORATORY USE ONLY

Logged In By: EJTotal Samples: 35/23Laboratory #: 1730



January 2, 2024

Lab No. : VI 2348632

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

Customer No. : 4018573
Reference : 42201

Laboratory Report

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

- | | | |
|-----------------|-----------|---|
| Case Narrative | (1 page) | : An overview of the work performed at FGL. |
| Sample Results | (3 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
7BD	12/18/2023	12/18/2023	VI 2348632-001	DW
D-3	12/18/2023	12/18/2023	VI 2348632-002	DW
Domestic	12/18/2023	12/18/2023	VI 2348632-003	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 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

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

KD: JRD

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
 Title: Laboratory Director
 Date: 2024-01-03

Section: Case Narrative

Page 1 of 6

Page 1 of 6

Corporate Offices & Laboratory 853 Corporation Street Santa Paula, CA 93060 TEL: (805)392-2000 Env FAX: (805)525-4172 / Ag FAX: (805)392-2063 CA ELAP Certification No. 1573	Office & Laboratory 2500 Stagecoach Road Stockton, CA 95215 TEL: (209)942-0182 FAX: (209)942-0423	Office & Laboratory 563 E. Lindo Avenue Chico, CA 95926 TEL: (530)343-5818 FAX: (530)343-3807	Office & Laboratory 3442 Empressa Drive, Suite D San Luis Obispo, CA 93401 TEL: (805)783-2940 FAX: (805)783-2912	Office & Laboratory 9415 W. Goshen Avenue Visalia, CA 93291 TEL: (559)734-9473 FAX: (559)734-8435
				CA ELAP Certification No. 2775



January 2, 2024

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

Description : 7BD
 Project : 0021 K & M Visser

Lab No. : VI 2348632-001
 Customer No.: 4018573
 Reference : 42201
 Sampled On : December 18, 2023 at 08:30
 Sampled By : Zeke
 Received On : December 18, 2023 at 15:55
 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													
Alkalinity (as CaCO ₃)	110	10	mg/L		1		12/25/2023	21:20	amm	SM 4500-H+B	12/26/2023	07:04	amm
Bicarbonate	130	10	mg/L		1		12/25/2023	21:20	amm	SM 4500-H+B	12/26/2023	07:04	amm
Carbonate	ND	10	mg/L		1	U	12/25/2023	21:20	amm	SM 4500-H+B	12/26/2023	07:04	amm
Hydroxide	ND	10	mg/L		1	U	12/25/2023	21:20	amm	SM 4500-H+B	12/26/2023	07:04	amm
Chloride	47	1	mg/L	500 ²	1	h	12/19/2023	15:32	ldm	EPA 300.0	12/20/2023	03:37	ldm
Nitrate Nitrogen	3.6	0.1	mg/L	10	1	h	12/19/2023	15:32	ldm	EPA 300.0	12/20/2023	03:37	ldm
Conductivity	437	1	umhos/cm	1600 ²	1		12/25/2023	21:20	amm	SM 4500-H+B	12/26/2023	07:04	amm
Sulfate Sulfur	10.5	0.17	mg/L		1		12/19/2023	15:32	ldm	EPA 300.0	12/20/2023	03:37	ldm
Solids, Total Dissolved (TDS)	290	20	mg/L	1000 ²	1		12/20/2023	12:00	ctl	SM 2540 C	12/21/2023	12:00	ctl
Calcium	37	1	mg/L		1	h	12/20/2023	07:00	ac	EPA 200.7	12/20/2023	20:30	ac
Magnesium	3	1	mg/L		1		12/20/2023	07:00	ac	EPA 200.7	12/20/2023	20:30	ac
Potassium	ND	1	mg/L		1	U	12/20/2023	07:00	ac	EPA 200.7	12/20/2023	20:30	ac
Sodium	47	1	mg/L		1	hl	12/20/2023	07:00	ac	EPA 200.7	12/20/2023	20:30	ac

DQF Flags Definition:

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

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

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

Corporate Offices & Laboratory	Office & Laboratory	Office & Laboratory	Office & Laboratory	Office & 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	2500 Stagecoach Road Stockton, CA 95215 TEL: (209)942-0182 FAX: (209)942-0423 CA ELAP Certification No. 1563	563 E. Lindo Avenue Chico, CA 95926 TEL: (530)343-5818 FAX: (530)343-3807 CA ELAP Certification No. 2670	3442 Empressa Drive, Suite D San Luis Obispo, CA 93401 TEL: (805)783-2940 FAX: (805)783-2912 CA ELAP Certification No. 2775	9415 W. Goshen Avenue Visalia, CA 93291 TEL: (559)734-9473 FAX: (559)734-8435 CA ELAP Certification No. 2810



January 2, 2024

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

Description : D-3
 Project : 0021 K & M Visser

Lab No. : VI 2348632-002
 Customer No.: 4018573
 Reference : 42201
 Sampled On : December 18, 2023 at 08:20
 Sampled By : Zeke
 Received On : December 18, 2023 at 15:55
 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	0.4	0.4	mg/L	10	1		12/19/2023	14:30	lfs	SM 4500-NO3 F	12/19/2023	15:49	lfs
Conductivity	226	1	umhos/cm	1600 ²	1		12/22/2023	09:20	krh	SM 4500-H+B	12/22/2023	12:57	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.



January 2, 2024

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

Description : Domestic
 Project : 0021 K & M Visser

Lab No. : VI 2348632-003
 Customer No.: 4018573
 Reference : 42201
 Sampled On : December 18, 2023 at 08:10
 Sampled By : Zeke
 Received On : December 18, 2023 at 15:55
 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	0.7	0.4	mg/L	10	1		12/19/2023	14:30	lfs	SM 4500-NO3 F	12/19/2023	15:51	lfs
Conductivity	225	1	umhos/cm	1600 ²	1		12/22/2023	09:20	krh	SM 4500-H+B	12/22/2023	13:14	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.



January 2, 2024
Innovative Ag Services, LLC

Lab No. : VI 2348632
 Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	12/20/2023:214322AC (VI 2348243-001)	Blank LCS MS MSD MSRPD (VI 2348281-001) MS MSD MSRPD	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 4.0% 12.00 12.00 12.00	ND 102% 135% 108% 4.0% 153% 88.7% 15.2%	<1 85-115 <¼ 75-125 ≤20.0 75-125 75-125 ≤20.0	406 435
Magnesium	200.7	12/20/2023:214322AC (VI 2348243-001)	Blank LCS MS MSD MSRPD (VI 2348281-001) 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 5.1% 12.00 12.00 12.00	ND 98.7% 102% 95.7% 75-125 114% 104% 6.0%	<1 85-115 75-125 75-125 ≤20 75-125 75-125 ≤20	
Potassium	200.7	12/20/2023:214322AC (VI 2348243-001)	Blank LCS MS MSD MSRPD (VI 2348281-001) 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 4.9% 12.00 12.00 12.00	ND 101% 105% 100% 75-125 111% 104% 5.0%	<1 85-115 75-125 75-125 ≤20.0 75-125 75-125 ≤20.0	
Sodium	200.7	12/20/2023:214322AC (VI 2348243-001)	Blank LCS MS MSD MSRPD (VI 2348281-001) 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 4.4% 12.00 12.00 12.00	ND 95.8% 130% 91.8% 75-125 154% 69.1% 18.5%	<1 85-115 <¼ 75-125 ≤20.0 75-125 75-125 ≤20.0	406 435 435

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.
- 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

- 406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.
- 435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

January 2, 2024
Innovative Ag Services, LLC

Lab No. : VI 2348632
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO3)	2320B	(VI 2348632-001)	Dup	mg/L		0%	10	
Bicarbonate	2320B	(VI 2348632-001)	Dup	mg/L		0%	10	
E. C.	2320B	(VI 2348744-001)	Dup	umhos/cm		0.2%	5	
	2320B	(VI 2348632-001)	Dup	umhos/cm		0.2%	5	
Solids, Total Dissolved	2540CE	12/20/2023:214352CTL	Blank	mg/L	991.5	ND	<20	
		(VI 2348628-001)	LCS	mg/L		101%	90-110	
		(VI 2348628-001)	Dup	mg/L		0.9%	5	
		(VI 2348628-001)	Dup	mg/L		0.2%	5	
Chloride	300.0	12/19/2023:214318LDM	Blank	mg/L		ND	<1	
		(VI 2348298-001)	LCS	mg/L	25.00	99.6%	90-110	
		(CH 2390221-002)	MS	mg/L	50.00	163%	67-117	435
		(CH 2390221-002)	MSD	mg/L	50.00	163%	67-117	435
		(CH 2390221-002)	MSRPD	mg/L		0.2%	≤7	
		(CH 2390221-002)	MS	mg/L	50.00	95.6%	67-117	
		(CH 2390221-002)	MSD	mg/L	50.00	95.6%	67-117	
		(CH 2390221-002)	MSRPD	mg/L		0.0%	≤7	
Nitrate Nitrogen	300.0	12/19/2023:214318LDM	Blank	mg/L		ND	<0.4	
		(VI 2348298-001)	LCS	mg/L	20.00	100%	90-110	
		(CH 2390221-002)	MS	mg/L	40.00	155%	86-112	435
		(CH 2390221-002)	MSD	mg/L	40.00	156%	86-112	435
		(CH 2390221-002)	MSRPD	mg/L		0.2%	≤7	
		(CH 2390221-002)	MS	mg/L	40.00	93.7%	86-112	
		(CH 2390221-002)	MSD	mg/L	40.00	93.7%	86-112	
		(CH 2390221-002)	MSRPD	mg/L		0.0%	≤7	
Sulfate Sulfur	300.0	12/19/2023:214318LDM	Blank	mg/L		ND	<0.5	
		(VI 2348298-001)	LCS	mg/L	50.00	101%	90-110	
		(CH 2390221-002)	MS	mg/L	100.0	140%	18-165	
		(CH 2390221-002)	MSD	mg/L	100.0	141%	18-165	
		(CH 2390221-002)	MSRPD	mg/L		0.3%	≤7	
		(CH 2390221-002)	MS	mg/L	100.0	101%	18-165	
		(CH 2390221-002)	MSD	mg/L	100.0	101%	18-165	
		(CH 2390221-002)	MSRPD	mg/L		0.0%	≤7	
Nitrate Nitrogen	4500NO3F	12/19/2023:214315LFS	Blank	mg/L		ND	<0.4	
		(SP 2320748-003)	LCS	mg/L	11.22	96.6%	80-120	
		(SP 2320748-003)	MS	mg/L	5.609	93.1%	66-125	
		(SP 2320748-003)	MSD	mg/L	5.609	95.4%	66-125	
		(SP 2320748-003)	MSRPD	mg/L		1.2%	≤30.4	

Definition

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

Explanation

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



Laboratory Analysis Work Order

2348652

Nº 42201

ID: # 0021

SITE NAME: KFM VISSCHER

Billing:

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

- W1 EC, NO₃N (Dom)
 W2 EC, NO₃N, TDS, TN (Irr)
 W3 NH₄-N (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: _____

QD V. m/s
X X X X

Plant Tissue

- P1 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: _____

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	7BD	W4	12-18 8:30	Zelce			
2	D-3	W1	12-18 8:20	Zelce			
3	Domestic	W1	12-18 8:10	Zelce			
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		24		12-18-23 / 11:50
2 nd		F6C	12-18-23 15:50	
3 rd		F6C		12-18-23 15:55
4 th			12-18-23 15:55	

LABORATORY USE ONLY

Logged In By:

Total Samples:

Laboratory #:

GILS 12/19/23 14:24

JAW 12/19/23 14:24