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INNOVATIVE
AG SERVICES

Zonneveld Dairies Complex

2023 Annual Report

X	Report Form	NA	Attachment H
X	Attachment A	NA	Attachment I
X	Attachment B	NA	Attachment J
X	Attachment C	X	Manure Tracking Manifests
X	Attachment D	NA	New or Revised Waste Water Agreements
X	Attachment E	X	Groundwater Monitoring Samples
X	Attachment F	NA	Monitoring Well Report
X	Attachment G	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)

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Annual Report

Zonneveld Dairies Complex 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Facility Information:

Name of Dairy	Zonneveld Dairies Complex
Facility Address	1523 E. Cerini Avenue, Laton CA 93242

Owner/Operator as of 12/31/2023

Operator Name	Zonneveld Dairies, Inc.
Operator Phone	(559) 923-4546
Owner Name	Zonneveld Dairies, Inc.
Owner Phone	(559) 923-4546

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:

X No discharges occurred during the reporting period.

__ Yes. ____ Number of discharges occurred (see Attachment H).

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Zonneveld Dairies Complex 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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:

X 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:

X 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.

X 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.

X 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.

X 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).

X 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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Zonneveld Dairies Complex 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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

X 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

X 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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Zonneveld Dairies Complex 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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."

Same as owner	DocuSigned by: 4C4A48EC17AE47B...
Signature of Operator of Facility	Signature of Owner of Facility
Zonneveld Dairies, Inc.	Zonneveld Dairies, Inc.
Print Name	Print Name
	6/25/2024
Title and Date	Title and Date

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Zonneveld Dairies Complex 2023

Estimated Manure and Nutrients Generated (Attachment A)

Animal Type	Maximum No. of Head	Average No. of Head*	Housing Type	Weight	Total Manure Produced (tons/year)	NITROGEN Net (LB) Available for Land Application	PHOSPHORUS Net (LB) Available for Land Application	POTASSIUM Net (LB) Available for Land Application	SALTS Net (LB) Available for Land Application
Hol Milk Cows	2,249	2,192	Milk Flushed Lane	1,400	55,630.52	792,079.20	136,013.60	184,018.40	1,444,944.48
Hol Milk Cows	2,596	2,531	Milk Freestall -	1,400	64,233.97	914,576.85	157,048.55	212,477.45	1,668,409.89
Hol Dry Cows	840	819	Flushed	1,450	11,950.94	149,467.50	20,925.45	98,648.55	210,928.54
Hol Heifers(15-24)	5,889	5,741	Dry Scrape	1,000	59,927.57	796,276.70	125,727.90	377,183.70	1,478,560.10
Hol Heifers (7-14)	1,035	1,009	Dry Scrape	750	9,703.83	95,754.10	16,204.54	55,242.75	121,810.26
Hol Calves (4-6)	4,405	4,294	Dry Scrape	300	14,889.44	219,423.40	62,692.40	125,384.80	102,815.54
Hol Calves (0-3)	813	792	Calves Dry Scrape	150	2,746.26	5,781.60	2,890.80	11,563.20	6,958.16
	17,827	**17,378**			**219,082.54**	**2,973,359.35**	**521,503.24**	**1,064,518.85**	**5,034,426.97**

* 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)**
112,530,135	342.75	71.15	435.75	3,845.00	321,285.63	66,694.30	408,461.60	3,604,210.8

* 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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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 406

Wheat, 18 Acres Planted on 11/07/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			140	0	0	4,462	
10/20/2022	Waste Water: Main Lagoon	1.50	Acre Inches		244.00	60.90	326.00	mg/L		733,166	1,490	372	1,991	26,261	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			252				
02/24/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
02/24/2023	Waste Water: Main Lagoon	1.25	Acre Inches		355.00	102.00	584.00	mg/L		610,972	1,807	519	2,972	20,714	
03/16/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
03/16/2023	Waste Water: Main Lagoon	0.70	Acre Inches		355.00	102.00	584.00	mg/L		342,144	1,012	291	1,664	11,600	
05/16/2023	Harvest	18.20	Tons	64.50	1.51	0.33	2.07	%							3,512
	Acre Inches Applied:	**15.45**						**Totals:**		**1,686,282**	**4,700**	**1,182**	**6,628**	**63,037**	**3,512**
Season Nitrogen Ratio:	1.34							**Lbs Per Acre:**			**261**	**66**	**368**	**3,502**	**195**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 407

Wheat, 92 Acres Planted on 11/10/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/02/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			714	0	0	22,808	
10/02/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		4,996,391	10,155	2,535	13,568	178,966	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,288				
02/23/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
02/23/2023	Waste Water: Main Lagoon	1.25	Acre Inches		355.00	102.00	584.00	mg/L		3,122,744	9,234	2,653	15,191	105,871	
03/20/2023	Surface Water: Laguna	4.50	Acre Inches		0.00			mg/L			0	0	0	0	
03/20/2023	Waste Water: Main Lagoon	1.25	Acre Inches		355.00	102.00	584.00	mg/L		3,122,744	9,234	2,653	15,191	105,871	
05/02/2023	Harvest	19.80	Tons	61.60	1.65	0.43	2.37	%							23,084
	Acre Inches Applied:	**17.00**						**Totals:**		**11,241,880**	**30,625**	**7,841**	**43,950**	**413,515**	**23,084**
Season Nitrogen Ratio:	1.33							**Lbs Per Acre:**			**333**	**85**	**478**	**4,495**	**251**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 407

Corn, 92 Acres Planted on 06/24/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/22/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
05/22/2023	Waste Water: Main Lagoon	0.75	Acre Inches		355.00	60.70	435.00	mg/L		1,873,647	5,540	948	6,790	63,991	
07/12/2023	Ground Water: Well Avg	6.00	Acre Inches		0.23			mg/L			29	0	0	45,782	
07/15/2023	Fertilize - UN32	25.00	Gallons		32.00	0.00	0.00	%			6,131	0	0	0	
07/22/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			22	0	0	34,336	
07/22/2023	Waste Water: Main Lagoon	0.50	Acre Inches		326.00	52.70	344.00	mg/L		1,249,098	3,392	548	3,580	40,371	
08/16/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			24	0	0	38,151	
08/26/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			24	0	0	38,151	
08/26/2023	Waste Water: Main Lagoon	0.50	Acre Inches		326.00	52.70	344.00	mg/L		1,249,098	3,392	548	3,580	40,371	
09/20/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			22	0	0	34,336	
09/29/2023	Harvest	30.10	Tons	72.30	1.08	0.22	1.43	%							16,568
	Acre Inches Applied:	**32.75**						**Totals:**		**4,371,842**	**18,577**	**2,044**	**13,949**	**335,491**	**16,568**
Season Nitrogen Ratio:	1.12							**Lbs Per Acre:**			**202**	**22**	**152**	**3,647**	**180**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 408

Wheat, 16 Acres Planted on 11/17/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/21/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			124	0	0	3,967	
10/21/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		868,938	1,766	441	2,360	31,124	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			224				
02/26/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
02/26/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	102.00	584.00	mg/L		434,469	1,285	369	2,114	14,730	
03/17/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
03/17/2023	Waste Water: Main Lagoon	1.25	Acre Inches		355.00	102.00	584.00	mg/L		543,086	1,606	461	2,642	18,412	
05/23/2023	Harvest	19.90	Tons	69.80	1.96	0.35	2.56	%							3,769
	Acre Inches Applied:	**16.25**						**Totals:**		**1,846,492**	**5,005**	**1,271**	**7,115**	**68,233**	**3,769**
Season Nitrogen Ratio:	1.33							**Lbs Per Acre:**			**313**	**79**	**445**	**4,265**	**236**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 408

Corn, 16 Acres Planted on 06/25/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/10/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
06/10/2023	Waste Water: Main Lagoon	0.75	Acre Inches		355.00	60.70	435.00	mg/L		325,852	964	165	1,181	11,129	
07/11/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/15/2023	Fertilize - UN32	25.00	Gallons		32.00	0.00	0.00	%			1,066	0	0	0	
07/21/2023	Ground Water: Well Avg	6.00	Acre Inches		0.23			mg/L			5	0	0	7,962	
07/21/2023	Waste Water: Main Lagoon	0.50	Acre Inches		326.00	52.70	344.00	mg/L		217,234	590	95	623	7,021	
08/15/2023	Ground Water: Well Avg	6.00	Acre Inches		0.23			mg/L			5	0	0	7,962	
08/23/2023	Ground Water: Well Avg	6.00	Acre Inches		0.23			mg/L			5	0	0	7,962	
08/23/2023	Waste Water: Main Lagoon	0.50	Acre Inches		326.00	52.70	344.00	mg/L		217,234	590	95	623	7,021	
09/19/2023	Ground Water: Well Avg	6.00	Acre Inches		0.23			mg/L			5	0	0	7,962	
10/12/2023	Harvest	29.20	Tons	75.50	1.27	0.22	1.59	%							2,907
	Acre Inches Applied:	**37.75**						**Totals:**		**760,320**	**3,230**	**356**	**2,426**	**57,019**	**2,907**
Season Nitrogen Ratio:	1.11							**Lbs Per Acre:**			**202**	**22**	**152**	**3,564**	**182**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 409

Wheat, 23 Acres Planted on 11/17/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			178	0	0	5,702	
10/20/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		1,249,098	2,539	634	3,392	44,741	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			322				
02/24/2023	Surface Water: Laguna	4.20	Acre Inches		0.00			mg/L			0	0	0	0	
02/24/2023	Waste Water: Main Lagoon	1.50	Acre Inches		355.00	102.00	584.00	mg/L		936,823	2,770	796	4,557	31,761	
03/16/2023	Surface Water: Laguna	4.20	Acre Inches		0.00			mg/L			0	0	0	0	
03/16/2023	Waste Water: Main Lagoon	1.50	Acre Inches		355.00	102.00	584.00	mg/L		936,823	2,770	796	4,557	31,761	
05/16/2023	Harvest	21.20	Tons	60.90	1.86	0.44	2.52	%							7,092
	Acre Inches Applied:	**17.40**						**Totals:**		**3,122,744**	**8,580**	**2,226**	**12,507**	**113,966**	**7,092**
Season Nitrogen Ratio:	1.21							**Lbs Per Acre:**			**373**	**97**	**544**	**4,955**	**308**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 409

Corn, 23 Acres Planted on 06/22/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/25/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
05/25/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	60.70	435.00	mg/L		624,549	1,847	316	2,263	21,330	
07/14/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/24/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			6	0	0	8,584	
07/24/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		624,549	1,696	274	1,790	20,186	
08/14/2023	Ground Water: Well Avg	6.00	Acre Inches		0.23			mg/L			7	0	0	11,445	
08/24/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		624,549	1,696	274	1,790	20,186	
08/25/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			6	0	0	9,538	
09/09/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			6	0	0	8,584	
09/29/2023	Harvest	30.90	Tons	73.00	1.19	0.23	1.63	%							4,567
	Acre Inches Applied:	**35.00**						**Totals:**		**1,873,647**	**5,263**	**864**	**5,842**	**99,853**	**4,567**
Season Nitrogen Ratio:	1.15							**Lbs Per Acre:**			**229**	**38**	**254**	**4,341**	**199**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 410

Wheat, 25 Acres Planted on 11/16/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	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	4.00	Acre Inches		8.58			mg/L			194	0	0	6,198	
10/01/2022	Waste Water: Main Lagoon	1.50	Acre Inches		314.00	37.70	324.00	mg/L		1,018,286	2,664	320	2,748	25,362	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			350				
02/27/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
02/27/2023	Waste Water: Main Lagoon	1.25	Acre Inches		355.00	102.00	584.00	mg/L		848,572	2,509	721	4,128	28,769	
04/15/2023	Surface Water: Laguna	5.00	Acre Inches		0.00			mg/L			0	0	0	0	
04/15/2023	Waste Water: Main Lagoon	1.40	Acre Inches		355.00	102.00	584.00	mg/L		950,400	2,810	808	4,624	32,222	
05/23/2023	Harvest	22.40	Tons	69.20	1.80	0.35	2.36	%							6,209
	Acre Inches Applied:	**17.15**						**Totals:**		**2,817,259**	**8,527**	**1,848**	**11,500**	**92,551**	**6,209**
Season Nitrogen Ratio:	1.37							**Lbs Per Acre:**			**341**	**74**	**460**	**3,702**	**248**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 410

Corn, 25 Acres Planted on 06/24/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/10/2023	Surface Water: Laguna	5.00	Acre Inches		0.00			mg/L			0	0	0	0	
06/10/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	60.70	435.00	mg/L		678,858	2,008	343	2,460	23,185	
07/15/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,000	0	0	0	
07/19/2023	Surface Water: Laguna	5.50	Acre Inches		0.00			mg/L			0	0	0	0	
08/02/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			6	0	0	10,367	
08/02/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		678,858	1,844	298	1,945	21,941	
08/20/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			6	0	0	10,367	
09/01/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			6	0	0	10,367	
09/01/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		678,858	1,844	298	1,945	21,941	
09/22/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			6	0	0	10,367	
10/12/2023	Harvest	32.80	Tons	73.80	1.28	0.22	1.56	%							5,500
	Acre Inches Applied:	**33.50**						**Totals:**		**2,036,572**	**6,720**	**939**	**6,350**	**108,536**	**5,500**
Season Nitrogen Ratio:	1.22							**Lbs Per Acre:**			**269**	**38**	**254**	**4,341**	**220**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 411

Wheat, 61 Acres Planted on 11/17/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/02/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			473	0	0	15,123	
10/02/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		3,312,825	6,733	1,681	8,996	118,662	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			854				
02/19/2023	Surface Water: Laguna	4.50	Acre Inches		0.00			mg/L			0	0	0	0	
02/19/2023	Waste Water: Main Lagoon	1.50	Acre Inches		355.00	102.00	584.00	mg/L		2,484,618	7,347	2,111	12,087	84,236	
04/08/2023	Surface Water: Laguna	4.50	Acre Inches		0.00			mg/L			0	0	0	0	
04/08/2023	Waste Water: Main Lagoon	1.50	Acre Inches		355.00	102.00	584.00	mg/L		2,484,618	7,347	2,111	12,087	84,236	
05/23/2023	Harvest	21.00	Tons	71.50	2.33	0.58	3.83	%							17,013
	Acre Inches Applied:	**18.00**						**Totals:**		**8,282,062**	**22,755**	**5,903**	**33,171**	**302,257**	**17,013**
Season Nitrogen Ratio:	1.34							**Lbs Per Acre:**			**373**	**97**	**544**	**4,955**	**279**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 411

Corn, 61 Acres Planted on 06/18/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/30/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
05/30/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	60.70	435.00	mg/L		1,656,412	4,898	838	6,002	56,571	
06/30/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/12/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			16	0	0	25,296	
07/12/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		1,656,412	4,498	727	4,746	53,536	
07/15/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			2,439	0	0	0	
07/26/2023	Ground Water: Well Avg	5.50	Acre Inches		0.23			mg/L			18	0	0	27,826	
08/14/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			16	0	0	25,296	
08/14/2023	Waste Water: Main Lagoon	0.70	Acre Inches		326.00	52.70	344.00	mg/L		1,159,489	3,149	509	3,323	37,475	
09/02/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			16	0	0	25,296	
09/29/2023	Harvest	30.40	Tons	70.90	1.17	0.24	1.58	%							12,628
	Acre Inches Applied:	**35.20**						**Totals:**		**4,472,313**	**15,049**	**2,073**	**14,071**	**251,297**	**12,628**
Season Nitrogen Ratio:	1.19							**Lbs Per Acre:**			**247**	**34**	**231**	**4,120**	**207**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 416

Wheat, 38 Acres Planted on 11/09/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			295	0	0	9,421	
10/20/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		2,063,727	4,194	1,047	5,604	73,921	
12/25/2022	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
12/25/2022	Waste Water: Main Lagoon	1.25	Acre Inches		244.00	60.90	326.00	mg/L		1,289,829	2,622	654	3,502	46,200	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
03/20/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
03/23/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	102.00	584.00	mg/L		1,031,863	3,051	877	5,020	34,983	
05/02/2023	Harvest	19.60	Tons	64.50	1.44	0.33	2.09	%							7,615
	Acre Inches Applied:	**16.25**						**Totals:**		**4,385,419**	**10,694**	**2,578**	**14,126**	**164,525**	**7,615**
Season Nitrogen Ratio:	1.40							**Lbs Per Acre:**			**281**	**68**	**372**	**4,330**	**200**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 416

Corn, 38 Acres Planted on 06/19/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/12/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
05/12/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	60.70	435.00	mg/L		1,031,863	3,051	522	3,739	35,241	
06/29/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/11/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			10	0	0	15,758	
07/11/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		1,031,863	2,802	453	2,957	33,350	
07/15/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,519	0	0	0	
07/22/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			10	0	0	15,758	
08/05/2023	Ground Water: Well Avg	5.50	Acre Inches		0.23			mg/L			11	0	0	17,334	
08/05/2023	Waste Water: Main Lagoon	0.75	Acre Inches		326.00	52.70	344.00	mg/L		773,898	2,101	340	2,218	25,013	
08/31/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			10	0	0	15,758	
09/29/2023	Harvest	30.00	Tons	70.90	1.20	0.24	1.68	%							7,962
	Acre Inches Applied:	**35.25**						**Totals:**		**2,837,624**	**9,515**	**1,314**	**8,913**	**158,213**	**7,962**
Season Nitrogen Ratio:	1.20							**Lbs Per Acre:**			**250**	**35**	**235**	**4,164**	**210**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 417

Wheat, 9 Acres Planted on 11/09/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/29/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			70	0	0	2,231	
09/29/2022	Waste Water: Main Lagoon	2.00	Acre Inches		314.00	37.70	324.00	mg/L		488,777	1,278	154	1,319	12,174	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			126				
02/10/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
02/10/2023	Waste Water: Main Lagoon	0.80	Acre Inches		355.00	102.00	584.00	mg/L		195,511	578	166	951	6,628	
04/06/2023	Surface Water: Laguna	5.50	Acre Inches		0.00			mg/L			0	0	0	0	
04/06/2023	Waste Water: Main Lagoon	0.75	Acre Inches		355.00	102.00	584.00	mg/L		183,292	542	156	892	6,214	
05/02/2023	Harvest	18.20	Tons	63.00	1.54	0.31	2.16	%							1,867
	Acre Inches Applied:	**17.05**						**Totals:**		**867,580**	**2,594**	**475**	**3,162**	**27,248**	**1,867**
Season Nitrogen Ratio:	1.39							**Lbs Per Acre:**			**288**	**53**	**351**	**3,028**	**207**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 417

Corn, 9 Acres Planted on 06/25/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/21/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
05/21/2023	Waste Water: Main Lagoon	1.20	Acre Inches		355.00	60.70	435.00	mg/L		293,266	867	148	1,063	10,016	
07/13/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/25/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			2	0	0	3,732	
07/25/2023	Waste Water: Main Lagoon	1.20	Acre Inches		326.00	52.70	344.00	mg/L		293,266	796	129	840	9,479	
08/19/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			2	0	0	3,732	
08/30/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			2	0	0	3,732	
08/30/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		244,389	664	107	700	7,899	
09/08/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			2	0	0	3,359	
09/29/2023	Harvest	28.30	Tons	68.70	1.24	0.26	1.40	%							1,977
	Acre Inches Applied:	**34.90**						**Totals:**		**830,922**	**2,336**	**384**	**2,603**	**41,949**	**1,977**
Season Nitrogen Ratio:	1.18							**Lbs Per Acre:**			**260**	**43**	**289**	**4,661**	**220**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 419

Wheat, 47 Acres Planted on 11/22/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/29/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			365	0	0	11,652	
09/29/2022	Waste Water: Main Lagoon	2.00	Acre Inches		314.00	37.70	324.00	mg/L		2,552,504	6,676	802	6,889	63,575	
12/25/2022	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
12/25/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		2,552,504	5,188	1,295	6,932	91,428	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			658				
03/31/2023	Surface Water: Laguna	5.00	Acre Inches		0.00			mg/L			0	0	0	0	
03/31/2023	Waste Water: Main Lagoon	1.50	Acre Inches		355.00	102.00	584.00	mg/L		1,914,378	5,661	1,627	9,313	64,903	
05/23/2023	Harvest	23.00	Tons	62.70	1.68	0.33	2.31	%							13,548
	Acre Inches Applied:	**18.50**						**Totals:**		**7,019,387**	**18,548**	**3,723**	**23,133**	**231,558**	**13,548**
Season Nitrogen Ratio:	1.37							**Lbs Per Acre:**			**395**	**79**	**492**	**4,927**	**288**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 419

Corn, 47 Acres Planted on 06/25/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/10/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
06/10/2023	Waste Water: Main Lagoon	1.25	Acre Inches		355.00	60.70	435.00	mg/L		1,595,315	4,717	807	5,781	54,485	
07/15/2023	Fertilize - UN32	20.00	Gallons		32.00	0.00	0.00	%			2,506	0	0	0	
07/16/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/26/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			11	0	0	17,541	
07/26/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		1,276,252	3,466	560	3,657	41,249	
08/18/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			12	0	0	19,490	
08/28/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			11	0	0	17,541	
08/28/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		1,276,252	3,466	560	3,657	41,249	
09/12/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			12	0	0	19,490	
09/29/2023	Harvest	30.20	Tons	69.00	1.30	0.25	1.50	%							11,440
	Acre Inches Applied:	**34.25**						**Totals:**		**4,147,819**	**14,202**	**1,927**	**13,095**	**211,046**	**11,440**
Season Nitrogen Ratio:	1.24							**Lbs Per Acre:**			**302**	**41**	**279**	**4,490**	**243**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 422

Wheat, 54 Acres Planted on 10/19/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/14/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			419	0	0	13,387	
09/14/2022	Waste Water: Main Lagoon	2.00	Acre Inches		314.00	37.70	324.00	mg/L		2,932,664	7,671	921	7,915	73,043	
12/20/2022	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
12/20/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		2,932,664	5,961	1,488	7,964	105,045	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			756				
04/08/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
04/08/2023	Waste Water: Main Lagoon	1.25	Acre Inches		355.00	102.00	584.00	mg/L		1,832,915	5,420	1,557	8,916	62,142	
05/15/2023	Harvest	21.00	Tons	62.40	1.72	0.43	2.13	%							14,667
	Acre Inches Applied:	**17.25**						**Totals:**		**7,698,244**	**20,226**	**3,966**	**24,795**	**253,617**	**14,667**
Season Nitrogen Ratio:	1.38							**Lbs Per Acre:**			**375**	**73**	**459**	**4,697**	**272**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 422

Corn, 54 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/25/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
05/25/2023	Waste Water: Main Lagoon	1.40	Acre Inches		355.00	60.70	435.00	mg/L		2,052,865	6,071	1,038	7,438	70,111	
07/10/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/20/2023	Ground Water: Well Avg	4.00	Acre Inches		0.23			mg/L			11	0	0	17,914	
07/20/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		1,466,332	3,982	644	4,202	47,393	
08/14/2023	Ground Water: Well Avg	5.50	Acre Inches		0.23			mg/L			16	0	0	24,633	
08/27/2023	Ground Water: Well Avg	4.00	Acre Inches		0.23			mg/L			11	0	0	17,914	
08/27/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		1,466,332	3,982	644	4,202	47,393	
09/09/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			14	0	0	22,393	
09/29/2023	Harvest	29.10	Tons	71.00	1.27	0.26	1.59	%							11,575
	Acre Inches Applied:	**33.90**						**Totals:**		**4,985,529**	**14,087**	**2,325**	**15,842**	**247,751**	**11,575**
Season Nitrogen Ratio:	1.22							**Lbs Per Acre:**			**261**	**43**	**293**	**4,588**	**214**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 423

Wheat, 52 Acres Planted on 11/05/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			404	0	0	12,891	
10/20/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		2,824,047	5,740	1,433	7,669	101,155	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			728				
02/24/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
02/24/2023	Waste Water: Main Lagoon	1.70	Acre Inches		355.00	102.00	584.00	mg/L		2,400,440	7,099	2,039	11,678	81,383	
03/16/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
03/16/2023	Waste Water: Main Lagoon	1.50	Acre Inches		355.00	102.00	584.00	mg/L		2,118,035	6,263	1,800	10,304	71,808	
05/23/2023	Harvest	21.00	Tons	64.10	2.10	0.50	3.14	%							16,465
	Acre Inches Applied:	**17.20**						**Totals:**		**7,342,523**	**20,233**	**5,272**	**29,650**	**267,236**	**16,465**
Season Nitrogen Ratio:	1.23							**Lbs Per Acre:**			**389**	**101**	**570**	**5,139**	**317**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 423

Corn, 52 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/26/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
05/26/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	60.70	435.00	mg/L		1,412,024	4,176	714	5,116	48,225	
07/10/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/15/2023	Fertilize - UN32	25.00	Gallons		32.00	0.00	0.00	%			3,465	0	0	0	
07/21/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			14	0	0	21,564	
07/21/2023	Waste Water: Main Lagoon	0.75	Acre Inches		326.00	52.70	344.00	mg/L		1,059,018	2,876	465	3,035	34,228	
08/14/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			14	0	0	21,564	
08/25/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			14	0	0	21,564	
08/25/2023	Waste Water: Main Lagoon	0.50	Acre Inches		326.00	52.70	344.00	mg/L		706,012	1,917	310	2,023	22,819	
09/19/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			12	0	0	19,407	
10/04/2023	Harvest	31.00	Tons	75.60	1.33	0.26	1.27	%							10,462
	Acre Inches Applied:	**33.75**						**Totals:**		**3,177,053**	**12,487**	**1,489**	**10,174**	**189,370**	**10,462**
Season Nitrogen Ratio:	1.19							**Lbs Per Acre:**			**240**	**29**	**196**	**3,642**	**201**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 424

Wheat, 50 Acres Planted on 11/15/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/20/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			388	0	0	12,396	
09/20/2022	Waste Water: Main Lagoon	2.00	Acre Inches		314.00	37.70	324.00	mg/L		2,715,430	7,102	853	7,328	67,632	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			700				
01/28/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
01/28/2023	Waste Water: Main Lagoon	1.40	Acre Inches		355.00	102.00	584.00	mg/L		1,900,801	5,621	1,615	9,247	64,443	
04/10/2023	Surface Water: Laguna	4.00	Acre Inches		0.00			mg/L			0	0	0	0	
04/10/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	102.00	584.00	mg/L		1,357,715	4,015	1,154	6,605	46,030	
05/23/2023	Harvest	18.50	Tons	66.10	2.06	0.41	2.45	%							12,920
	Acre Inches Applied:	**16.40**						**Totals:**		**5,973,946**	**17,826**	**3,622**	**23,180**	**190,502**	**12,920**
Season Nitrogen Ratio:	1.38							**Lbs Per Acre:**			**357**	**72**	**464**	**3,810**	**258**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 424

Corn, 50 Acres Planted on 06/23/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/25/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
05/25/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	60.70	435.00	mg/L		1,357,715	4,015	686	4,920	46,370	
07/12/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/15/2023	Fertilize - UN32	25.00	Gallons		32.00	0.00	0.00	%			3,332	0	0	0	
07/23/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			12	0	0	18,661	
07/23/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		1,357,715	3,687	596	3,890	43,882	
08/14/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			12	0	0	18,661	
08/24/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			12	0	0	18,661	
08/24/2023	Waste Water: Main Lagoon	0.50	Acre Inches		326.00	52.70	344.00	mg/L		678,858	1,844	298	1,946	21,941	
09/19/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			12	0	0	18,661	
10/12/2023	Harvest	32.00	Tons	74.00	1.31	0.24	1.55	%							10,899
	Acre Inches Applied:	**32.50**						**Totals:**		**3,394,288**	**12,926**	**1,580**	**10,756**	**186,837**	**10,899**
Season Nitrogen Ratio:	1.19							**Lbs Per Acre:**			**259**	**32**	**215**	**3,737**	**218**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 454

Wheat, 39 Acres Planted on 11/21/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/10/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			303	0	0	9,668	
10/10/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		2,118,035	4,305	1,074	5,752	75,866	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			546				
02/24/2023	Surface Water: Laguna	5.00	Acre Inches		0.00			mg/L			0	0	0	0	
02/24/2023	Waste Water: Main Lagoon	1.50	Acre Inches		355.00	102.00	584.00	mg/L		1,588,527	4,698	1,350	7,728	53,856	
03/16/2023	Surface Water: Laguna	5.00	Acre Inches		0.00			mg/L			0	0	0	0	
03/16/2023	Waste Water: Main Lagoon	1.50	Acre Inches		355.00	102.00	584.00	mg/L		1,588,527	4,698	1,350	7,728	53,856	
05/16/2023	Harvest	21.80	Tons	62.00	1.68	0.37	2.48	%							10,855
	Acre Inches Applied:	**19.00**						**Totals:**		**5,295,088**	**14,549**	**3,774**	**21,207**	**193,246**	**10,855**
Season Nitrogen Ratio:	1.34							**Lbs Per Acre:**			**373**	**97**	**544**	**4,955**	**278**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 454

Corn, 39 Acres Planted on 06/23/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/20/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
05/20/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	60.70	435.00	mg/L		1,059,018	3,132	535	3,837	36,169	
07/10/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/15/2023	Fertilize - UN32	25.00	Gallons		32.00	0.00	0.00	%			2,599	0	0	0	
07/20/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			9	0	0	14,556	
07/20/2023	Waste Water: Main Lagoon	0.75	Acre Inches		326.00	52.70	344.00	mg/L		794,263	2,157	349	2,276	25,671	
08/14/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			9	0	0	14,556	
08/24/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			9	0	0	14,556	
08/24/2023	Waste Water: Main Lagoon	0.50	Acre Inches		326.00	52.70	344.00	mg/L		529,509	1,438	232	1,517	17,114	
09/18/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			9	0	0	14,556	
09/29/2023	Harvest	30.56	Tons	71.30	1.16	0.24	1.58	%							7,936
	Acre Inches Applied:	**32.25**						**Totals:**		**2,382,790**	**9,363**	**1,117**	**7,631**	**137,176**	**7,936**
Season Nitrogen Ratio:	1.18							**Lbs Per Acre:**			**240**	**29**	**196**	**3,517**	**203**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 457

Wheat, 4 Acres Planted on 11/11/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/03/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			31	0	0	992	
10/03/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		217,234	442	110	590	7,781	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			56				
02/18/2023	Ground Water: Well Avg	4.00	Acre Inches		0.23			mg/L			1	0	0	1,327	
02/18/2023	Waste Water: Main Lagoon	1.50	Acre Inches		355.00	102.00	584.00	mg/L		162,926	482	138	793	5,524	
03/20/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			1	0	0	1,659	
03/20/2023	Waste Water: Main Lagoon	1.25	Acre Inches		355.00	102.00	584.00	mg/L		135,772	401	115	660	4,603	
05/02/2023	Harvest	20.90	Tons	61.20	1.74	0.41	2.19	%							1,129
	Acre Inches Applied:	**17.75**						**Totals:**		**515,932**	**1,414**	**364**	**2,043**	**21,885**	**1,129**
Season Nitrogen Ratio:	1.25							**Lbs Per Acre:**			**353**	**91**	**511**	**5,471**	**282**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 457

Corn, 4 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/28/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			1	0	0	1,493	
05/28/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	60.70	435.00	mg/L		108,617	321	55	394	3,710	
06/29/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			1	0	0	1,493	
07/15/2023	Fertilize - UN32	25.00	Gallons		32.00	0.00	0.00	%			267	0	0	0	
07/20/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			1	0	0	1,493	
07/20/2023	Waste Water: Main Lagoon	0.50	Acre Inches		326.00	52.70	344.00	mg/L		54,309	147	24	156	1,755	
08/14/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			1	0	0	1,493	
08/20/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			1	0	0	1,493	
08/20/2023	Waste Water: Main Lagoon	0.50	Acre Inches		326.00	52.70	344.00	mg/L		54,309	147	24	156	1,755	
09/01/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			1	0	0	1,493	
09/29/2023	Harvest	27.00	Tons	69.20	1.18	0.25	1.48	%							785
	Acre Inches Applied:	**29.00**						**Totals:**		**217,234**	**888**	**103**	**705**	**16,177**	**785**
Season Nitrogen Ratio:	1.13							**Lbs Per Acre:**			**222**	**26**	**176**	**4,044**	**196**

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 458

Wheat, 5 Acres Planted on 11/11/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/20/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			39	0	0	1,240	
09/20/2022	Waste Water: Main Lagoon	2.00	Acre Inches		314.00	37.70	324.00	mg/L		271,543	710	85	733	6,763	
12/29/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			39	0	0	1,240	
12/29/2022	Waste Water: Main Lagoon	1.30	Acre Inches		244.00	60.90	326.00	mg/L		176,503	359	90	479	6,322	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			70				
03/26/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			1	0	0	1,866	
03/26/2023	Waste Water: Main Lagoon	1.30	Acre Inches		355.00	102.00	584.00	mg/L		176,503	522	150	859	5,984	
05/02/2023	Harvest	20.90	Tons	62.60	1.70	0.39	2.41	%							1,329
	Acre Inches Applied:	**17.10**						**Totals:**		**624,549**	**1,740**	**325**	**2,071**	**23,415**	**1,329**
Season Nitrogen Ratio:	1.31							**Lbs Per Acre:**			**348**	**65**	**414**	**4,683**	**266**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: 458

Corn, 5 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/23/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			1	0	0	1,866	
05/23/2023	Waste Water: Main Lagoon	0.90	Acre Inches		355.00	60.70	435.00	mg/L		122,194	361	62	443	4,173	
06/30/2023	Ground Water: Well Avg	5.50	Acre Inches		0.23			mg/L			1	0	0	2,281	
07/09/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			1	0	0	2,073	
07/19/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			1	0	0	1,866	
07/19/2023	Waste Water: Main Lagoon	0.75	Acre Inches		326.00	52.70	344.00	mg/L		101,829	276	45	292	3,291	
08/14/2023	Ground Water: Well Avg	5.50	Acre Inches		0.23			mg/L			1	0	0	2,281	
08/22/2023	Ground Water: Well Avg	4.50	Acre Inches		0.23			mg/L			1	0	0	1,866	
08/22/2023	Waste Water: Main Lagoon	0.75	Acre Inches		326.00	52.70	344.00	mg/L		101,829	276	45	292	3,291	
09/12/2023	Harvest	27.00	Tons	76.00	1.37	0.27	1.35	%							888
	Acre Inches Applied:	**31.90**						**Totals:**		**325,852**	**922**	**151**	**1,026**	**22,989**	**888**
Season Nitrogen Ratio:	1.04							**Lbs Per Acre:**			**184**	**30**	**205**	**4,598**	**178**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: T7

Wheat, 38 Acres Planted on 10/28/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/19/2022	Ground Water: Well Avg	4.00	Acre Inches		8.58			mg/L			295	0	0	9,421	
10/19/2022	Waste Water: Main Lagoon	2.00	Acre Inches		244.00	60.90	326.00	mg/L		2,063,727	4,194	1,047	5,604	73,921	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			532				
02/10/2023	Surface Water: Laguna	4.40	Acre Inches		0.00			mg/L			0	0	0	0	
02/10/2023	Waste Water: Main Lagoon	1.50	Acre Inches		355.00	102.00	584.00	mg/L		1,547,795	4,577	1,315	7,530	52,475	
03/30/2023	Surface Water: Laguna	4.30	Acre Inches		0.00			mg/L			0	0	0	0	
03/30/2023	Waste Water: Main Lagoon	1.25	Acre Inches		355.00	102.00	584.00	mg/L		1,289,829	3,814	1,096	6,275	43,729	
05/02/2023	Harvest	19.40	Tons	63.40	1.83	0.44	2.74	%							9,875
	Acre Inches Applied:	**17.45**						**Totals:**		**4,901,351**	**13,412**	**3,458**	**19,408**	**179,545**	**9,875**
Season Nitrogen Ratio:	1.36							**Lbs Per Acre:**			**353**	**91**	**511**	**4,725**	**260**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Field Name: T7

Corn, 38 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/29/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
05/29/2023	Waste Water: Main Lagoon	1.00	Acre Inches		355.00	60.70	435.00	mg/L		1,031,863	3,051	522	3,739	35,241	
07/05/2023	Surface Water: Laguna	6.00	Acre Inches		0.00			mg/L			0	0	0	0	
07/15/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			1,519	0	0	0	
07/19/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			10	0	0	15,758	
07/19/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		1,031,863	2,802	453	2,957	33,350	
08/14/2023	Ground Water: Well Avg	5.50	Acre Inches		0.23			mg/L			11	0	0	17,334	
08/24/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			10	0	0	15,758	
08/24/2023	Waste Water: Main Lagoon	1.00	Acre Inches		326.00	52.70	344.00	mg/L		1,031,863	2,802	453	2,957	33,350	
09/09/2023	Ground Water: Well Avg	5.00	Acre Inches		0.23			mg/L			10	0	0	15,758	
09/29/2023	Harvest	31.70	Tons	69.60	1.19	0.24	1.54	%							8,716
	Acre Inches Applied:	**35.50**						**Totals:**		**3,095,590**	**10,216**	**1,428**	**9,652**	**166,551**	**8,716**
Season Nitrogen Ratio:	1.17							**Lbs Per Acre:**			**269**	**38**	**254**	**4,383**	**229**

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Zonneveld Dairies Complex 2023

Nutrient Applications (Attachment B)

Summary of Nutrient Applications, Removal, and Balance

	Total N (Lbs)	Total P (Lbs)	Total K (Lbs)	Total Salts (Lbs)	Total Manure Applied	
Solid Manure	0.00	0.00	0.00	0.00		tons
Process Wastewater	298,301.91	65,922.94	400,683.56	3,744,155.59	112,530,134.63	gallons
Irrigation Water	5,072.33					
Fertilizer / Total Imports	25,842.25					
Atmospheric Deposition	7,994.00					
Total Nitrogen Applied	**337,210.49**					
Crop Nitrogen Removal	265,758.80					
Nitrogen Balance	**71,451.69**					
Nitrogen Ratio	**1.27**					

- **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.**

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Zonneveld Dairies Complex 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

Zonneveld Dairies Complex 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)**
15,850	422,466.29	104,929.76	759,639.95	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 (N03-N or TKN, P, K, TDS) x 10-6 using the samples closest in date to the export event.

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Zonneveld Dairies Complex 2023

Land Application Area Description Technical Report (Attachment D)

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
406	x055 x051 x05S xxxx	18	Process Wastewater
407	x055 x220 x34S xxxx	92	Process Wastewater
408	x055 x300 x21S xxxx	16	Process Wastewater
409	x055 x300 x11S xxxx	23	Process Wastewater
410	x055 x300 xx15 xxxx	25	Process Wastewater
411	x055 x340 x10S xxxx	61	Process Wastewater
416	x055 x340 xx04 xxxx	38	Process Wastewater
417	x055 x340 xx04 xxxx	9	Process Wastewater
419	x055 x300 x20S xxxx	47	Process Wastewater
422	x055 x220 x34S xxxx, x055 x220 x58S xxxx	54	Process Wastewater
423	x055 x220 x26S xxxx, x055 x220 x34S xxxx, x055 x220 x45S xxxx, x055 x220 x46S xxxx, x055 x220 x58S xxxx	52	Process Wastewater
424	x055 x300 x05S xxxx, x055 x300 x22S xxxx	50	Process Wastewater
454	x055 x300 xx09 xxxx	39	Process Wastewater
457	x055 x310 x10S xxxx, x055 x310 x14S xxxx	4	Process Wastewater
458	x055 x310 x14S xxxx	5	Process Wastewater
T7	x055 x300 x23S xxxx, x055 x300 xx10 xxxx	38	Process Wastewater
		571	

Production Area APN(s): x055 x051 x02S xxxx, x055 x051 x03S xxxx, x055 x051 x04S xxxx, x055 x051 x09S xxxx, x055 x300 x12S xxxx, x055 x340 x10S xxxx

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Zonneveld Dairies Complex 2023

Lab Results Summary (Attachment E)

Process Wastewater

(mgl/ppm unless noted otherwise)

									General Minerals						
Sample Date:	TKN	TP	TK	EC (umhos/cm)	NH4N	NO3N	TDS	pH (units)	CA	MG	NA	HCO3	CO3	SO4	CL
03/09/2023	355.00	102.00	584.00	6,130	249.00		4,070.00								
06/16/2023	355.00	60.70	435.00	6,180	338.00	0.00	4,100.00	7.52							
07/14/2023	326.00	52.70	344.00	5,850	313.00		3,880.00								
11/09/2023	335.00	69.20	380.00	5,020	333.00		3,330.00								
Averages:	342.75	71.15	435.75	5,795	308.25	0.00	3,845.00	7.52							

Manure - Compost Solids

(Dry Weight Basis)

Sample Date:	TN	TP	TK	Moisture	Ash	CA	MG	NA	S	CL
06/05/2023	0.43	0.18	0.38	6.83						%
Averages:	0.43	0.18	0.38	6.83						

Manure - Corral Solids

(Dry Weight Basis)

Sample Date:	TN	TP	TK	Moisture	Ash	CA	MG	NA	S	CL
06/05/2023	1.62	0.81	1.81	16.40						%
11/09/2023	2.14	0.90	2.11	30.90						%
Averages:	1.88	0.85	1.96	23.65						

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Zonneveld Dairies Complex 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 (%)
406	1	Wheat	05/16/2023	30.20	6.68	41.40	64.50	8.33
407	1	Wheat	05/02/2023	33.00	8.62	47.40	61.60	8.93
407	2	Corn	09/29/2023	21.60	4.42	28.60	72.30	5.99
408	1	Wheat	05/23/2023	39.20	7.04	51.20	69.80	9.83
408	2	Corn	10/12/2023	25.40	4.32	31.80	75.50	7.31
409	1	Wheat	05/16/2023	37.20	8.84	50.40	60.90	9.09
409	2	Corn	09/29/2023	23.80	4.54	32.60	73.00	6.97
410	1	Wheat	05/23/2023	36.00	7.04	47.20	69.20	8.71
410	2	Corn	10/12/2023	25.60	4.40	31.20	73.80	7.35
411	1	Wheat	05/23/2023	46.60	11.66	76.60	71.50	13.60
411	2	Corn	09/29/2023	23.40	4.70	31.60	70.90	6.73
416	1	Wheat	05/02/2023	28.80	6.64	41.80	64.50	9.78
416	2	Corn	09/29/2023	24.00	4.88	33.60	70.90	6.80
417	1	Wheat	05/02/2023	30.80	6.26	43.20	63.00	9.18
417	2	Corn	09/29/2023	24.80	5.14	28.00	68.70	5.85
419	1	Wheat	05/23/2023	33.60	6.62	46.20	62.70	7.81
419	2	Corn	09/29/2023	26.00	5.08	30.00	69.00	6.61
422	1	Wheat	05/15/2023	34.40	8.56	42.60	62.40	8.71

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Zonneveld Dairies Complex 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 (%)
422	2	Corn	09/29/2023	25.40	5.14	31.80	71.00	6.60
423	1	Wheat	05/23/2023	42.00	9.94	62.80	64.10	11.30
423	2	Corn	10/04/2023	26.60	5.24	25.40	75.60	6.21
424	1	Wheat	05/23/2023	41.20	8.28	49.00	66.10	8.36
424	2	Corn	10/12/2023	26.20	4.80	31.00	74.00	7.24
454	1	Wheat	05/16/2023	33.60	7.46	49.60	62.00	9.90
454	2	Corn	09/29/2023	23.20	4.70	31.60	71.30	6.46
457	1	Wheat	05/02/2023	34.80	8.26	43.80	61.20	9.04
457	2	Corn	09/29/2023	23.60	4.94	29.60	69.20	6.12
458	1	Wheat	05/02/2023	34.00	7.80	48.20	62.60	9.00
458	2	Corn	09/12/2023	27.40	5.44	27.00	76.00	6.38
T7	1	Wheat	05/02/2023	36.60	8.86	54.80	63.40	8.63
T7	2	Corn	09/29/2023	23.80	4.76	30.80	69.60	5.84

Well / Irrigation Water

(mgl/ppm unless noted otherwise)

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

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Zonneveld Dairies Complex 2023

Lab Results Summary (Attachment E)

Well / Irrigation Water

(mgl/ppm unless noted otherwise)

	Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	General Minerals CA	MG	NA	HCO3	CO3	SO4	CL
Dairy														
DW1	12/08/2023	9.00		427		270.00		7.00	0.00	81.00	120.00	0.00	13.20	14.00
	Averages:	9.00		427		270.00		7.00	0.00	81.00	120.00	0.00	13.20	14.00
Domestic														
D1	12/11/2023	6.20		292		170.00		4.00	0.00	63.00	100.00	0.00	4.40	9.00
D6	12/11/2023	9.40		426										
D7	12/11/2023	7.30		393		260.00		5.00	0.00	81.00	110.00	10.00	11.40	16.00
D8	12/11/2023	7.50		392		230.00		5.00	0.00	79.00	100.00	10.00	11.10	17.00
D9	06/15/2023	20.80		544		360.00		8.00	0.00	98.00	140.00	0.00	10.10	31.00
D10	12/08/2023	18.60		525		330.00		7.00	0.00	96.00	110.00	10.00	9.20	27.00
D11	06/15/2023	0.20		272		190.00		2.00	0.00	57.00	120.00	0.00	5.50	10.00
D12							Out of service.							
D13							Out of service							
D14	06/15/2023	0.20		241		150.00		0.00	0.00	49.00	100.00	0.00	4.60	8.00
D16							Out of service.							
	Averages:	8.78		386		241.43		4.43	0.00	74.71	111.43	4.29	8.04	16.86

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Zonneveld Dairies Complex 2023

Lab Results Summary (Attachment E)

Well / Irrigation Water

(mgl/ppm unless noted otherwise)

							General Minerals						
	Sample Date:	**NO3N**	**TP**	**EC (umhos/cm)**	**NH4N ***	**TDS**	**TN**	**CA**	**MG**	**NA**	**HCO3**	**CO3**	**SO4**	**CL**
Irrigation														
P-1	10/18/2023	0.00		306		230.00	0.00							
P-3							Out of service.							
P-4							Did not run.							
P-5	10/18/2023	0.00		973		720.00	0.00							
P-9	09/29/2023	0.70		218		150.00	0.70	3.00	0.00	46.00	90.00	0.00	5.10	6.00
P-11							Out of service.							
P-12							Out of service.							
P-13							Did not run.							
T-7							Did not run.							
	Averages:	0.23		499		366.67	0.23	3.00	0.00	46.00	90.00	0.00	5.10	6.00
Surface Water														
Laguna (General)	07/06/2023	0.00		26		0.00	0.00							
	Averages:	0.00		26		0.00	0.00							

* NH4N was non-detectable unless a value is shown

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Zonneveld Dairies Complex 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: 406								
	1	Wheat	18	11/07/2022	05/16/2023	17.9	327.6	18.2
Field: 407								
	1	Wheat	92	11/10/2022	05/02/2023	20.6	1821.6	19.8
	2	Corn	92	06/24/2023	09/29/2023	29.3	2769.2	30.1
Field: 408								
	1	Wheat	16	11/17/2022	05/23/2023	20.2	318.4	19.9
	2	Corn	16	06/25/2023	10/12/2023	30.0	467.2	29.2
Field: 409								
	1	Wheat	23	11/17/2022	05/16/2023	21.0	487.6	21.2
	2	Corn	23	06/22/2023	09/29/2023	31.5	710.7	30.9
Field: 410								
	1	Wheat	25	11/16/2022	05/23/2023	23.6	560.0	22.4
	2	Corn	25	06/24/2023	10/12/2023	32.9	820.0	32.8
Field: 411								
	1	Wheat	61	11/17/2022	05/23/2023	21.2	1281.0	21.0
	2	Corn	61	06/18/2023	09/29/2023	28.7	1854.4	30.4
Field: 416								
	1	Wheat	38	11/09/2022	05/02/2023	19.8	744.8	19.6
	2	Corn	38	06/19/2023	09/29/2023	28.2	1140.0	30.0
Field: 417								
	1	Wheat	9	11/09/2022	05/02/2023	17.7	163.8	18.2
	2	Corn	9	06/25/2023	09/29/2023	27.3	254.7	28.3
Field: 419								
	1	Wheat	47	11/22/2022	05/23/2023	22.4	1081.0	23.0
	2	Corn	47	06/25/2023	09/29/2023	30.0	1419.4	30.2

INNOVATIVE AG SERVICES

Zonneveld Dairies Complex 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: 422								
	1	Wheat	54	10/19/2022	05/15/2023	22.5	1134.0	21.0
	2	Corn	54	06/15/2023	09/29/2023	29.0	1571.4	29.1
Field: 423								
	1	Wheat	52	11/05/2022	05/23/2023	22.2	1092.0	21.0
	2	Corn	52	06/15/2023	10/04/2023	30.2	1612.0	31.0
Field: 424								
	1	Wheat	50	11/15/2022	05/23/2023	17.4	925.0	18.5
	2	Corn	50	06/23/2023	10/12/2023	31.2	1600.0	32.0
Field: 454								
	1	Wheat	39	11/21/2022	05/16/2023	22.7	850.2	21.8
	2	Corn	39	06/23/2023	09/29/2023	29.7	1191.8	30.6
Field: 457								
	1	Wheat	4	11/11/2022	05/02/2023	21.7	83.6	20.9
	2	Corn	4	06/15/2023	09/29/2023	23.0	108.0	27.0
Field: 458								
	1	Wheat	5	11/11/2022	05/02/2023	20.2	104.5	20.9
	2	Corn	5	06/15/2023	09/12/2023	24.9	135.0	27.0
Field: T7								
	1	Wheat	38	10/28/2022	05/02/2023	20.7	737.2	19.4
	2	Corn	38	06/15/2023	09/29/2023	31.2	1204.6	31.7

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Zonneveld Dairies Complex 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

INNOVATIVE AG SERVICES

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ATTACHMENT D

Manure/Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies

Instructions:

1) Complete one manifest for each hauling event, for each destination. A hauling event may last for several days, as long as the manure is being hauled to the same destination.
2) If there are multiple destinations, **complete a separate form for each destination**.
3) The operator must obtain the signature of the hauler upon completion of each manure-hauling event.
4) The operator shall submit copies of manure/process wastewater tracking manifest(s) with the Annual Monitoring Report for Existing Milk Cow Dairies.

Operator Information:

Name of Operator: Josh Zonneveld

Name of Dairy Facility: Zonneveld Dairies Complex

Facility Address: 1523 E. Cerini Avenue | Laton | 93242
Number and Street | City | Zip Code

Contact Person Name and Phone Number: Josh Zonneveld | (559) 923-4546
Name | Phone Number

Manure/Process Wastewater Hauler Information:

Name of Hauling Company/Person: Zonneveld Daries

Address of Hauling Company /Person: 1560 E. Cerini | Laton | 93242
Number and Street | City | Zip Code

Contact Person: Josh Zonneveld | (559) 923-4546
Name | Phone Number

Destination Information:

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

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

Zonneveld Farms | 1560 E. Cerini | Laton | 93242
Name | Number and Street | City | Zip Code | Phone Number

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

1560 E. Cerini | Laton | 93242
Number and Street | City | Zip Code | Assessor's Parcel Number

Dates Hauled: 1/12/23 - 12/15/23

Amount Hauled:

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

Manure: 15182 Tons or Cubic Yards (indicate which units used)
Manure Solids Content (if amount reported in tons): 69.1%
Manure Density (if amount reported in cubic yards): _____

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Method used to determine amount of manure: _____

_____

Enter the amount of process wastewater hauled in gallons and the method used to determine the amount.

Process Wastewater: _____ Gallons

Method used to determine volume of process wastewater: _____

_____

Written Agreement:
Does the Operator have a written agreement (in compliance with Land Application Specification E.3 of Reissued Waste Discharge Requirements General Order No. R5-2013-0122) with any party that receives process wastewater from the Operator for its own use? (please check one)

____ Yes _____ No

If the answer is no, the Operator agrees to have such a written agreement with any such party for any process wastewater transferred after **31 December 2007** to such party.
_____ (Operator shall provide initials here to acknowledge this requirement).

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

Operator's Signature: DocuSigned by: 4C4A48EC17AE47B... Date: 6/25/2024

Hauler's Signature: DocuSigned by: 4C4A48EC17AE47B... Date: 6/25/2024

DocuSign Envelope ID: 1FCB215C-915D-4BC2-813F-3D6759E4D99F

ATTACHMENT D

Manure/Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies

Instructions:

1) Complete one manifest for each hauling event, for each destination. A hauling event may last for several days, as long as the manure is being hauled to the same destination.
2) If there are multiple destinations, **complete a separate form for each destination**.
3) The operator must obtain the signature of the hauler upon completion of each manure-hauling event.
4) The operator shall submit copies of manure/process wastewater tracking manifest(s) with the Annual Monitoring Report for Existing Milk Cow Dairies.

Operator Information:

Name of Operator: Josh Zonneveld

Name of Dairy Facility: Zonneveld Dairies Complex

Facility Address: 1523 E. Cerini Avenue (Number and Street) Laton (City) 93242 (Zip Code)

Contact Person Name and Phone Number: Josh Zonneveld (Name) (559) 923-4546 (Phone Number)

Manure/Process Wastewater Hauler Information:

Name of Hauling Company/Person: TI Inc

Address of Hauling Company /Person: 13802 Avenue 352 (Number and Street) Visalia (City) 93292 (Zip Code)

Contact Person: Bryce Iden (Name) (559) 972-1475 (Phone Number)

Destination Information:

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

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

Name	Number and Street	City	Zip Code	Phone Number
TI Inc	13802 Avenue 352	Visalia	93292	(559) 972-1475

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

Number and Street	City	Zip Code	Assessor's Parcel Number
13802 Avenue 352	Visalia	93292	

Dates Hauled: 4/6/2023 - 4/15/2023

Amount Hauled:

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

Manure: 668 Tons or Cubic Yards (indicate which units used)

Manure Solids Content (if amount reported in tons): 93.2%

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

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Method used to determine amount of manure: Truck Weights

Enter the amount of process wastewater hauled in gallons and the method used to determine the amount.

Process Wastewater: _____ Gallons

Method used to determine volume of process wastewater: _____

Written Agreement:
Does the Operator have a written agreement (in compliance with Land Application Specification E.3 of Reissued Waste Discharge Requirements General Order No. R5-2013-0122) with any party that receives process wastewater from the Operator for its own use? (please check one)

____ Yes _____ No

If the answer is no, the Operator agrees to have such a written agreement with any such party for any process wastewater transferred after **31 December 2007** to such party.
_____ (Operator shall provide initials here to acknowledge this requirement).

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

Operator's Signature: DocuSigned by: 4C4A48EC17AE47B... Date: 6/25/2024

Hauler's Signature: DocuSigned by: 4C4A48EC17AE47B... Date: 6/25/2024

DocuSign Envelope ID: 1FCB215C-915D-4BC2-813F-3D6759E4D99F

ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

July 7, 2023

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

Lab No. : **VI 2343839**
Customer No. : **4018573**
Reference : **40896**

Laboratory Report

Introduction: This report package contains a total of 8 pages divided into 3 sections:

Case Narrative	(2 pages)	: An overview of the work performed at FGL.
Sample Results	(3 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
D14	06/15/2023	06/15/2023	VI 2343839-001	DW
D11	06/15/2023	06/15/2023	VI 2343839-002	DW
D9	06/15/2023	06/15/2023	VI 2343839-003	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 except those as listed in the table below. 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.

Samples Over Hold Time

Lab No	Analyte Method	Maximum Hold Time	Actual Hold Time
VI 2343839-003	Nitrate Nitrogen	48 hours	264.3 hours

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 2320 B	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)

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

KD: EHB

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-07-10

Page 2 of 8

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

July 7, 2023

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

Description : D14
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2343839-001
Customer No. : 4018573
Reference : 40896
Sampled On : June 15, 2023 at 12:15
Sampled By : Henry
Received On : June 15, 2023 at 16:02
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	80	10	mg/L		1		06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Bicarbonate	100	10	mg/L		1		06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Carbonate	ND	10	mg/L		1	U	06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Hydroxide	ND	10	mg/L		1	U	06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Chloride	8	1	mg/L	500[2]	1		06/16/2023	11:27	ldm	EPA 300.0	06/16/2023	22:47	ldm
Nitrate Nitrogen	0.2	0.1	mg/L	10	1		06/16/2023	11:27	ldm	EPA 300.0	06/16/2023	22:47	ldm
Conductivity	241	1	umhos/cm	1600[2]	1		06/19/2023	15:19	amm	SM 4500-H+B	06/19/2023	18:56	amm
Sulfate Sulfur	4.60	0.17	mg/L		1		06/16/2023	11:27	ldm	EPA 300.0	06/16/2023	22:47	ldm
Solids, Total Dissolved (TDS)	150	20	mg/L	1000[2]	1		06/19/2023	13:00	ctl	SM 2540 C	06/20/2023	11:30	ctl
Calcium	ND	1	mg/L		1	J	06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:54	ac
Magnesium	ND	1	mg/L		1	U	06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:54	ac
Potassium	ND	1	mg/L		1	Ul	06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:54	ac
Sodium	49	1	mg/L		1		06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:54	ac

DQF Flags Definition:
U Constituent results were non-detect.
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.
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.

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

July 7, 2023

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

Description : D11
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2343839-002
Customer No. : 4018573
Reference : 40896
Sampled On : June 15, 2023 at 12:30
Sampled By : Henry
Received On : June 15, 2023 at 16:02
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	100	10	mg/L		1		06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Bicarbonate	120	10	mg/L		1		06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Carbonate	ND	10	mg/L		1	U	06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Hydroxide	ND	10	mg/L		1	U	06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Chloride	10	1	mg/L	500[2]	1	bl	06/16/2023	10:00	ldm	EPA 300.0	06/17/2023	02:16	ldm
Nitrate Nitrogen	0.2	0.1	mg/L	10	1		06/16/2023	10:00	ldm	EPA 300.0	06/17/2023	02:16	ldm
Conductivity	272	1	umhos/cm	1600[2]	1		06/19/2023	15:19	amm	SM 4500-H+B	06/19/2023	19:47	amm
Sulfate Sulfur	5.50	0.17	mg/L		1		06/16/2023	10:00	ldm	EPA 300.0	06/17/2023	02:16	ldm
Solids, Total Dissolved (TDS)	190	10	mg/L	1000[2]	1		06/16/2023	15:35	ctl	SM 2540 C	06/19/2023	11:30	ctl
Calcium	2	1	mg/L		1		06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:41	ac
Magnesium	ND	1	mg/L		1	U	06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:41	ac
Potassium	ND	1	mg/L		1	Jl	06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:41	ac
Sodium	57	1	mg/L		1		06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:41	ac

DQF Flags Definition:
- U Constituent results were non-detect.
- b The Blank was positive for constituent but less than the PQL
- l The MS/MSD did not meet QC criteria.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution
MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

July 7, 2023

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

Description : D9
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2343839-003
Customer No. : 4018573
Reference : 40896
Sampled On : June 15, 2023 at 12:40
Sampled By : Henry
Received On : June 15, 2023 at 16:02
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	120	10	mg/L		1		06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Bicarbonate	140	10	mg/L		1		06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Carbonate	ND	10	mg/L		1	U	06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Hydroxide	ND	10	mg/L		1	U	06/19/2023	15:19	amm	SM 2320 B	06/20/2023	14:26	amm
Chloride	31	1	mg/L	500[2]	1		06/26/2023	12:55	ldm	EPA 300.0	06/26/2023	16:44	ldm
Nitrate Nitrogen	20.8	0.2*	mg/L	10	2	T	06/26/2023	12:55	ldm	EPA 300.0	06/27/2023	00:23	ldm
Conductivity	544	1	umhos/cm	1600[2]	1		06/19/2023	15:19	amm	SM 4500-H+B	06/19/2023	19:15	amm
Sulfate Sulfur	10.1	0.17	mg/L		1		06/26/2023	12:55	ldm	EPA 300.0	06/26/2023	16:44	ldm
Solids, Total Dissolved (TDS)	360	10	mg/L	1000[2]	1		06/16/2023	15:35	ctl	SM 2540 C	06/19/2023	11:30	ctl
Calcium	8	1	mg/L		1		06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:32	ac
Magnesium	ND	1	mg/L		1	U	06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:32	ac
Potassium	ND	1	mg/L		1	Jl	06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:32	ac
Sodium	98	1	mg/L		1		06/20/2023	23:05	ejc	EPA 200.7	06/22/2023	11:32	ac

DQF Flags Definition:
- U Constituent results were non-detect.
- T Exceeded method/regulatory-specific holding time.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.
- l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level * RL adusted for dilution, Dil.=Dilution
MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

July 7, 2023
Innovative Ag Services, LLC

Lab No. : VI 2343839
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	06/20/2023:206797EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	92.8%	85-115	
			MS	mg/L	12.00	40.0%	<¼	406
		(CC 2381947-004)	MSD	mg/L	12.00	-340%	<1/4	
			MSRPD	mg/L		57.0%	≤20.0	435
			MS	mg/L	12.00	51.1%	<¼	406
		(CC 2381947-003)	MSD	mg/L	12.00	67.2%	<1/4	
			MSRPD	mg/L		2.9%	≤20.0	
Magnesium	200.7	06/20/2023:206797EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	101%	85-115	
			MS	mg/L	12.00	62.6%	<¼	406
		(CC 2381947-004)	MSD	mg/L	12.00	-201%	<1/4	
			MSRPD	mg/L		56.1%	≤20	435
			MS	mg/L	12.00	56.8%	<¼	406
		(CC 2381947-003)	MSD	mg/L	12.00	68.8%	<1/4	
			MSRPD	mg/L		2.2%	≤20	
Potassium	200.7	06/20/2023:206797EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	93.6%	85-115	
			MS	mg/L	12.00	101%	75-125	
		(CC 2381947-004)	MSD	mg/L	12.00	52.0%	75-125	435
			MSRPD	mg/L		53.0%	≤20.0	435
			MS	mg/L	12.00	101%	75-125	
		(CC 2381947-003)	MSD	mg/L	12.00	103%	75-125	
			MSRPD	mg/L		1.8%	≤20.0	
Sodium	200.7	06/20/2023:206797EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	94.7%	85-115	
			MS	mg/L	12.00	65.6%	<¼	406
		(CC 2381947-004)	MSD	mg/L	12.00	-188%	<1/4	
			MSRPD	mg/L		58.0%	≤20.0	435
			MS	mg/L	12.00	46.9%	<¼	406
		(CC 2381947-003)	MSD	mg/L	12.00	64.8%	<1/4	
			MSRPD	mg/L		3.0%	≤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 analyted. 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.

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July 7, 2023
Innovative Ag Services, LLC

Lab No. : VI 2343839
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO3)	2320B	06/19/2023:206731AMM	ND	mg/L		0%	10	435
Bicarbonate	2320B	(STK2337664-003)	Dup	mg/L		0%	10	
Carbonate	2320B	(STK2337664-003)	Dup	mg/L			10	
E. C.	2320B	(STK2337664-003)	Dup	umhos/cm		0.8%	5	
Solids, Total Dissolved	2540CE	06/16/2023:206628CTL	Blank	mg/L		ND	<10	
			LCS	mg/L	993.7	102%	90-110	
		(SP 2310120-001)	Dup	mg/L		4.17%	12.2	
		(SP 2310120-001)	Dup	mg/L		1.91%	12.2	
	2540CE	06/19/2023:206717CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	993.7	98.8%	90-110	
		(SP 2310253-004)	Dup	mg/L		3.95%	5	
		(SP 2310253-004)	Dup	mg/L		0.5%	5	
Chloride	300.0	06/16/2023:206702LDM	Blank	mg/L		1	<1	
	300.0	06/16/2023:206701LDM	Blank	mg/L		ND	<1	
	300.0	06/16/2023:206702LDM	LCS	mg/L	25.00	101 %	90-110	
	300.0	06/16/2023:206701LDM	LCS	mg/L	25.00	101 %	90-110	
	300.0	06/16/2023:206702LDM	MS	mg/L	50.00	73.5 %	85-121	435
		(STK2337929-004)	MSD	mg/L	50.00	24.9 %	85-121	435
			MSRPD	mg/L	10.00	25.7%	≤19	435
			MS	mg/L	50.00	104 %	85-121	
	300.0	06/16/2023:206701LDM	MS	mg/L	50.00	93.6 %	85-121	
		(SP 2309900-001)	MSD	mg/L	50.00	90.6 %	85-121	
	300.0	(VI 2343839-002)	MSD	mg/L	50.00	102 %	85-121	
			MSRPD	mg/L	10.00	1.9%	≤19	
	300.0	06/16/2023:206701LDM	MSRPD	mg/L	10.00	1.6%	≤19	
	300.0	06/26/2023:207044LDM	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	101 %	90-110	
			MS	mg/L	50.00	99.3 %	85-121	
		(VI 2344193-003)	MSD	mg/L	50.00	97.3 %	85-121	
			MSRPD	mg/L	10.00	1.6%	≤19	
Nitrate Nitrogen	300.0	06/16/2023:206701LDM	Blank	mg/L		ND	<0.4	
	300.0	06/16/2023:206702LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	101 %	90-110	
	300.0	06/16/2023:206701LDM	LCS	mg/L	20.00	102 %	90-110	
	300.0	06/16/2023:206702LDM	MS	mg/L	40.00	107 %	85-119	
	300.0	06/16/2023:206701LDM	MS	mg/L	40.00	108 %	85-119	
	300.0	(STK2337929-004)	MSD	mg/L	40.00	103 %	85-119	
	300.0	(SP 2309900-002)	MSD	mg/L	40.00	103 %	85-119	
	300.0	06/16/2023:206702LDM	MSRPD	mg/L	10.00	3.6%	≤19	
	300.0	06/16/2023:206701LDM	MSRPD	mg/L	10.00	4.3%	≤19	
			MS	mg/L	40.00	108 %	85-119	
	300.0	06/16/2023:206702LDM	MS	mg/L	40.00	108 %	85-119	
		(VI 2343839-002)	MSD	mg/L	40.00	105 %	85-119	
	300.0	(SP 2309900-001)	MSD	mg/L	40.00	104 %	85-119	
			MSRPD	mg/L	10.00	3.2%	≤19	
	300.0	06/16/2023:206702LDM	MSRPD	mg/L	10.00	2.2%	≤19	
	300.0	06/26/2023:207044LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	102 %	90-110	
			MS	mg/L	40.00	102 %	85-119	
		(VI 2344193-003)	MSD	mg/L	40.00	100 %	85-119	

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July 7, 2023
Innovative Ag Services, LLC

Lab No. : VI 2343839
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
			MSRPD	mg/L	10.00	1.7%	≤19	
			MS	mg/L	40.00	105 %	85-119	
		(VI 2344193-008)	MSD	mg/L	40.00	102 %	85-119	
			MSRPD	mg/L	10.00	3.0%	≤19	
Sulfate Sulfur	300.0	06/16/2023:206702LDM	Blank	mg/L		ND	<0.5	
	300.0	06/16/2023:206701LDM	Blank	mg/L		ND	<0.5	
	300.0	06/16/2023:206702LDM	LCS	mg/L	50.00	102 %	90-110	
	300.0	06/16/2023:206701LDM	LCS	mg/L	50.00	101 %	90-110	
			MS	mg/L	100.0	92.9 %	82-124	
	300.0	06/16/2023:206702LDM	MS	mg/L	100.0	103 %	82-124	
		(STK2337929-004)	MSD	mg/L	100.0	99.2 %	82-124	
	300.0	(SP 2309900-002)	MSD	mg/L	100.0	88.7 %	82-124	
			MSRPD	mg/L	10.00	2.2%	≤23	
	300.0	06/16/2023:206702LDM	MSRPD	mg/L	10.00	2.8%	≤23	
			MS	mg/L	100.0	106 %	82-124	
	300.0	06/16/2023:206701LDM	MS	mg/L	100.0	98.9 %	82-124	
	300.0	(VI 2343839-002)	MSD	mg/L	100.0	103 %	82-124	
	300.0	(SP 2309900-001)	MSD	mg/L	100.0	95.7 %	82-124	
			MSRPD	mg/L	10.00	2.0%	≤23	
	300.0	06/16/2023:206702LDM	MSRPD	mg/L	10.00	1.9%	≤23	
	300.0	06/26/2023:207044LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	102 %	90-110	
			MS	mg/L	100.0	94.1 %	82-124	
		(VI 2344193-003)	MSD	mg/L	100.0	92.3 %	82-124	
			MSRPD	mg/L	10.00	1.1%	≤23	
			MS	mg/L	100.0	93.1 %	82-124	
		(VI 2344193-008)	MSD	mg/L	100.0	90.4 %	82-124	
			MSRPD	mg/L	10.00	1.6%	≤23	

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 analyted. 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.

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Laboratory Analysis Work Order

Nº 40896

2343839

ID: #0351

LABORATORY: FGL

SITE NAME: Zonneveld Complex

Billing: IAS

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

Pol a.1

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3, CO_3, SO_4S, 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: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, 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: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N*	pH	Temp
1	D14	Dom	W4	12:15 6/15	Henry	—		
2	D11	"	"	12:30 6/15	"	—		
3	D9	"	"	12:40 6/15	"			
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 sampes, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st	[signature]	IAS		6/15/23
2nd	AJB	FGL	6/15/23 1545	
3rd	AJB	FGL		6/15/23 1602
4th	[signature]		6/15/23 1602	

LABORATORY USE ONLY

Logged In By: [signature]

Total Samples: 6/15/23 1724

Laboratory #: [signature] 6/16/23 1120

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

November 1, 2023

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

Lab No. : **VI 2346586**
Customer No. : **4018573**
Reference : **41437**

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	(1 page)	: 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
P-9	09/29/2023	09/29/2023	VI 2346586-001	AGW

Sampling and Receipt Information:

The Sample was received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. The Sample was 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: 2023-11-01

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

November 1, 2023

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

Description : P-9
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2346586-001
Customer No. : 4018573
Reference : 41437
Sampled On : September 29, 2023 at 10:45
Sampled By : Zeke
Received On : September 29, 2023 at 15:57
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	80	10	mg/L		1		10/03/2023	18:10	amm	SM 4500-H+B	10/04/2023	06:21	amm
Bicarbonate	90	10	mg/L		1		10/03/2023	18:10	amm	SM 4500-H+B	10/04/2023	06:21	amm
Carbonate	ND	10	mg/L		1	J	10/03/2023	18:10	amm	SM 4500-H+B	10/04/2023	06:21	amm
Hydroxide	ND	10	mg/L		1	J	10/03/2023	18:10	amm	SM 4500-H+B	10/04/2023	06:21	amm
Chloride	6	1	mg/L		1		10/25/2023	14:23	ldm	EPA 300.0	10/25/2023	21:05	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	10/11/2023	07:25	sta	EPA 351.2	10/13/2023	16:34	lcr
Nitrate Nitrogen	0.7	0.4	mg/L		1		10/03/2023	13:00	lfs	SM 4500-NO3 F	10/03/2023	15:07	lfs
Nitrogen, Total as Nitrogen	0.7	0.5	mg/L		1	l	10/11/2023	07:25	sta	Calc.	10/13/2023	16:34	lcr
Nitrate + Nitrite as N	0.7	0.4	mg/L		1		10/03/2023	13:00	lfs	SM 4500-NO3 F	10/03/2023	15:07	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	10/11/2023	07:25	sta	EPA 351.2	10/13/2023	16:34	lcr
Conductivity	218	1	umhos/cm		1		10/03/2023	18:10	amm	SM 4500-H+B	10/04/2023	06:21	amm
Sulfate Sulfur	5.1	0.17	mg/L		1		10/25/2023	14:23	ldm	EPA 300.0	10/25/2023	21:05	ldm
Solids, Total Dissolved (TDS)	150	20	mg/L		1		10/03/2023	09:54	ctl	SM 2540 C	10/04/2023	11:00	ctl
Calcium	3	1	mg/L		1		10/03/2023	05:12	ejc	EPA 200.7	10/04/2023	14:49	ac
Magnesium	ND	1	mg/L		1	U	10/03/2023	05:12	ejc	EPA 200.7	10/04/2023	14:49	ac
Sodium	46	1	mg/L		1		10/03/2023	05:12	ejc	EPA 200.7	10/04/2023	14:49	ac

DQF Flags Definition:
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

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

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

November 1, 2023
Innovative Ag Services, LLC

Lab No. : VI 2346586
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	10/03/2023:211093EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	103%	85-115	
			MS	mg/L	12.00	103%	75-125	
		(VI 2346586-001)	MSD	mg/L	12.00	107%	75-125	
			MSRPD	mg/L		3.2%	≤20.0	
			MS	mg/L	12.00	59.5%	<¼	
		(VI 2346570-001)	MSD	mg/L	12.00	91.0%	75-125	
			MSRPD	mg/L		1.9%	≤20.0	
Magnesium	200.7	10/03/2023:211093EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	101%	85-115	
			MS	mg/L	12.00	103%	75-125	
		(VI 2346586-001)	MSD	mg/L	12.00	107%	75-125	
			MSRPD	mg/L		3.5%	≤20	
			MS	mg/L	12.00	97.5%	75-125	
		(VI 2346570-001)	MSD	mg/L	12.00	101%	75-125	
			MSRPD	mg/L		2.1%	≤20	
Sodium	200.7	10/03/2023:211093EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	102%	85-115	
			MS	mg/L	12.00	84.8%	75-125	
		(VI 2346586-001)	MSD	mg/L	12.00	104%	75-125	
			MSRPD	mg/L		4.0%	≤20.0	
			MS	mg/L	12.00	92.3%	75-125	
		(VI 2346570-001)	MSD	mg/L	12.00	99.3%	75-125	
			MSRPD	mg/L		1.5%	≤20.0	

Definition

<¼ : High Sample Background - Spike concentration was less than one forth of the sample concentration.
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 analyted. 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.

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November 1, 2023
Innovative Ag Services, LLC

Lab No. : VI 2346586
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO3)	2320B	10/03/2023:211091AMM	ND	mg/L		0.9%	10	
Bicarbonate	2320B	(VI 2346706-002)	Dup	mg/L		0.9%	10	
E. C.	2320B	(VI 2346706-002)	Dup	umhos/cm		0.2%	5	
Solids, Total Dissolved	2540CE	10/03/2023:211103CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	101%	90-110	
		(SP 2316497-003)	Dup	mg/L		1.92%	5	
		(SP 2316497-003)	Dup	mg/L		0.09%	5	
Chloride	300.0	10/25/2023:212096LDM	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	98.3%	90-110	
			MS	mg/L	50.00	86.5%	67-117	
		(STK2354204-004)	MSD	mg/L	50.00	87.3%	67-117	
			MSRPD	mg/L		0.4%	≤7	
			MS	mg/L	50.00	104%	67-117	
		(STK2354204-008)	MSD	mg/L	50.00	104%	67-117	
			MSRPD	mg/L		0.0%	≤7	
Sulfate Sulfur	300.0	10/25/2023:212096LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	99.2%	90-110	
			MS	mg/L	100.0	97.9%	18-165	
		(STK2354204-004)	MSD	mg/L	100.0	98.3%	18-165	
			MSRPD	mg/L		0.3%	≤7	
			MS	mg/L	100.0	104%	18-165	
		(STK2354204-008)	MSD	mg/L	100.0	104%	18-165	
			MSRPD	mg/L		0.1%	≤7	
Nitrogen, Total Kjeldahl	351.2	10/11/2023:211433STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	93.1%	73-124	
			MS	mg/L	12.00	96.2%	90-110	
		(SP 2316536-001)	MSD	mg/L	12.00	94.4%	90-110	
			MSRPD	mg/L		1.8%	≤20	
			MS	mg/L	12.00	81.5%	90-110	435
		(VI 2346585-001)	MSD	mg/L	12.00	85.4%	90-110	435
			MSRPD	mg/L		4.5%	≤20	
Nitrate + Nitrite as N	4500NO3F	10/03/2023:211118LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	96.8%	80-120	
			MS	mg/L	5.609	99.1%	66-125	
		(STK2353580-001)	MSD	mg/L	5.609	101%	66-125	
			MSRPD	mg/L		1.8%	≤30.4	
Nitrate Nitrogen	4500NO3F	10/03/2023:211118LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	96.8%	80-120	
			MS	mg/L	5.609	99.1%	66-125	
		(STK2353580-001)	MSD	mg/L	5.609	101%	66-125	
			MSRPD	mg/L		1.8%	≤30.4	

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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 analyted. 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.

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Laboratory Analysis Work Order

Nº 41437

ID: # 0351 23465860

LABORATORY: FGL

SITE NAME: ZONNEVELD DAIRIES

Billing: IAS

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, 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: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, 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: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N *	pH	Temp
1	P-9	IRR	W5	9-29/10:45	Zeke			
2								
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 sampes, please note below.

NOTES: TH4B 11.1°C GLS 9/30/23 13:20

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st	[illegible]	IAS		9-29-23 1:15
2nd	AJB	FGL	9/29/23 1545	
3rd	AJB	FGL		9/29/23 1557
4th	[illegible]	FGL	9/29/23 1557	

LABORATORY USE ONLY

Logged In By: [illegible] GLS 9/29/23 1730 Total Samples: _____ Laboratory #: _____

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

November 6, 2023

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

Lab No. : **VI 2347069**
Customer No. : **4018573**
Reference : **41549**

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
P-1	10/18/2023	10/18/2023	VI 2347069-001	AGW
P-5	10/18/2023	10/18/2023	VI 2347069-002	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: 2023-11-07

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

November 6, 2023

Innovative Ag Services, LLC
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Description : P-1
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2347069-001
Customer No. : 4018573
Reference : 41549
Sampled On : October 18, 2023 at 13:15
Sampled By : Zeke
Received On : October 18, 2023 at 16:15
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	11/01/2023	13:01	sta	EPA 351.2	11/03/2023	17:43	lcr
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/19/2023	12:45	lfs	SM 4500-NO3 F	10/19/2023	15:16	lfs
Nitrogen, Total as Nitrogen	ND	0.5	mg/L		1	Ul	11/01/2023	13:01	sta	Calc.	11/03/2023	17:43	lcr
Nitrate + Nitrite as N	ND	0.4	mg/L		1	U	10/19/2023	12:45	lfs	SM 4500-NO3 F	10/19/2023	15:16	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	11/01/2023	13:01	sta	EPA 351.2	11/03/2023	17:43	lcr
Conductivity	306	1	umhos/cm		1		11/03/2023	07:56	krh	SM 4500-H+B	11/03/2023	10:14	krh
Solids, Total Dissolved (TDS)	230	20	mg/L		1		10/20/2023	11:30	ctl	SM 2540 C	10/23/2023	10:50	ctl

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

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

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

November 6, 2023

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

Description : P-5
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2347069-002
Customer No. : 4018573
Reference : 41549
Sampled On : October 18, 2023 at 13:30
Sampled By : Zeke
Received On : October 18, 2023 at 16:15
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	11/01/2023	13:01	sta	EPA 351.2	11/03/2023	17:45	lcr
Nitrate Nitrogen	31.3	0.4	mg/L		1		10/19/2023	12:45	lfs	SM 4500-NO3 F	10/19/2023	15:19	lfs
Nitrogen, Total as Nitrogen	31.3	0.5	mg/L		1	l	11/01/2023	13:01	sta	Calc.	11/03/2023	17:45	lcr
Nitrate + Nitrite as N	31.3	0.4	mg/L		1		10/19/2023	12:45	lfs	SM 4500-NO3 F	10/19/2023	15:19	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	11/01/2023	13:01	sta	EPA 351.2	11/03/2023	17:45	lcr
Conductivity	973	1	umhos/cm		1		11/03/2023	07:56	krh	SM 4500-H+B	11/03/2023	10:17	krh
Solids, Total Dissolved (TDS)	720	20	mg/L		1		10/20/2023	11:30	ctl	SM 2540 C	10/23/2023	10:50	ctl

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

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

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

November 6, 2023
Innovative Ag Services, LLC

Lab No. : VI 2347069
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2347281-001)	Dup	umhos/cm		0.1%	5	
Solids, Total Dissolved	2540CE	10/20/2023:211876CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	103%	90-110	
		(CH 2379072-003)	Dup	mg/L		3.77%	5	
		(CH 2379072-003)	Dup	mg/L		0.8%	5	
Nitrogen, Total Kjeldahl	351.2	11/01/2023:212413STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	92.7%	73-124	
			MS	mg/L	12.00	89.4%	90-110	435
		(VI 2347084-006)	MSD	mg/L	12.00	90.9%	90-110	
			MSRPD	mg/L		1.6%	≤20	
			MS	mg/L	12.00	81.1%	90-110	435
		(VI 2347084-007)	MSD	mg/L	12.00	79.4%	90-110	435
			MSRPD	mg/L		2.0%	≤20	
Nitrate + Nitrite as N	4500NO3F	10/19/2023:211831LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	98.9%	80-120	
			MS	mg/L	5.609	95.4%	66-125	
		(STK2354580-001)	MSD	mg/L	5.609	96.8%	66-125	
			MSRPD	mg/L		0.8%	≤30.4	
Nitrate Nitrogen	4500NO3F	10/19/2023:211831LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	98.9%	80-120	
			MS	mg/L	5.609	95.4%	66-125	
		(STK2354580-001)	MSD	mg/L	5.609	96.8%	66-125	
			MSRPD	mg/L		0.8%	≤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 analyted. 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.

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Laboratory Analysis Work Order

Nº 41549

ID: # 0351 2347069

LABORATORY: FGL

SITE NAME: Zonneveld Dairies

Billing: IAS

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, 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: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, 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: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N *	pH	Temp
1	P-1	IRR	W2	10-13 / 1:15	Zelec			
2	P-5	IRR	W2	10-18 / 1:30	Zelec			
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 sampes, please note below.

NOTES: GLS 10/19/23
CDA 1212

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st		IAS		10-18-23 / 3:15
2nd		FGL	10-18-23 16:06	
3rd		FGL		10-18-23 16:15
4th			10/18/23 1615	

LABORATORY USE ONLY

Logged In By: _____ Total Samples: 10/18/23 Laboratory #: _____

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

January 19, 2024

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

Lab No. : **VI 2348358**
Customer No. : **4018573**
Reference : **42141**

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	(2 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
DW1	12/08/2023	12/08/2023	VI 2348358-001	DW
D10	12/08/2023	12/08/2023	VI 2348358-002	DW

Sampling and Receipt Information:

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

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

Test Summary	
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)

Discussion of Analytical Results:

Corrected project name per client request.

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: 2024-01-19

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

January 19, 2024

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

Description : DW1
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2348358-001
Customer No. : 4018573
Reference : 42141
Sampled On : December 8, 2023 at 12:30
Sampled By : Zeke
Received On : December 8, 2023 at 15:51
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	110	10	mg/L		1		12/20/2023	15:48	amm	SM 4500-H+B	12/20/2023	19:19	amm
Bicarbonate	120	10	mg/L		1		12/20/2023	15:48	amm	SM 4500-H+B	12/20/2023	19:19	amm
Carbonate	ND	10	mg/L		1	U	12/20/2023	15:48	amm	SM 4500-H+B	12/20/2023	19:19	amm
Hydroxide	ND	10	mg/L		1	U	12/20/2023	15:48	amm	SM 4500-H+B	12/20/2023	19:19	amm
Chloride	14	1	mg/L	500[2]	1		12/22/2023	11:10	ldm	EPA 300.0	12/22/2023	15:04	ldm
Nitrate Nitrogen	9.0	0.4	mg/L	10	1		12/15/2023	13:00	lfs	SM 4500-NO3 F	12/15/2023	14:09	lfs
Conductivity	427	1	umhos/cm	1600[2]	1		12/20/2023	15:48	amm	SM 4500-H+B	12/20/2023	19:19	amm
Sulfate Sulfur	13.2	0.17	mg/L		1		12/22/2023	11:10	ldm	EPA 300.0	12/22/2023	15:04	ldm
Solids, Total Dissolved (TDS)	270	20	mg/L	1000[2]	1		12/12/2023	15:30	ctl	SM 2540 C	12/13/2023	11:30	ctl
Calcium	7	1	mg/L		1		12/12/2023	08:15	ejc	EPA 200.7	12/14/2023	18:20	ac
Magnesium	ND	1	mg/L		1	Uh	12/12/2023	08:15	ejc	EPA 200.7	12/14/2023	18:20	ac
Potassium	ND	1	mg/L		1	Uh	12/12/2023	08:15	ejc	EPA 200.7	12/14/2023	18:20	ac
Sodium	81	1	mg/L		1	h	12/12/2023	08:15	ejc	EPA 200.7	12/14/2023	18:20	ac

DQF Flags Definition:
U Constituent results were non-detect.
h 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.

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

January 19, 2024

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

Description : D10
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2348358-002
Customer No. : 4018573
Reference : 42141
Sampled On : December 8, 2023 at 13:15
Sampled By : Zeke
Received On : December 8, 2023 at 15:51
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	110	10	mg/L		1		12/20/2023	15:48	amm	SM 4500-H+B	12/20/2023	19:40	amm
Bicarbonate	110	10	mg/L		1		12/20/2023	15:48	amm	SM 4500-H+B	12/20/2023	19:40	amm
Carbonate	10	10	mg/L		1		12/20/2023	15:48	amm	SM 4500-H+B	12/20/2023	19:40	amm
Hydroxide	10	10	mg/L		1		12/20/2023	15:48	amm	SM 4500-H+B	12/20/2023	19:40	amm
Chloride	27	1	mg/L	500[2]	1		12/22/2023	11:10	ldm	EPA 300.0	12/22/2023	23:16	ldm
Nitrate Nitrogen	18.6	0.4	mg/L	10	1		12/15/2023	13:00	lfs	SM 4500-NO3 F	12/15/2023	14:06	lfs
Conductivity	525	1	umhos/cm	1600[2]	1		12/20/2023	15:48	amm	SM 4500-H+B	12/20/2023	19:40	amm
Sulfate Sulfur	9.2	0.17	mg/L		1		12/22/2023	11:10	ldm	EPA 300.0	12/22/2023	23:16	ldm
Solids, Total Dissolved (TDS)	330	20	mg/L	1000[2]	1		12/12/2023	15:30	ctl	SM 2540 C	12/13/2023	11:30	ctl
Calcium	7	1	mg/L		1		12/12/2023	08:15	ejc	EPA 200.7	12/14/2023	18:26	ac
Magnesium	ND	1	mg/L		1	Uh	12/12/2023	08:15	ejc	EPA 200.7	12/14/2023	18:26	ac
Potassium	ND	1	mg/L		1	Uh	12/12/2023	08:15	ejc	EPA 200.7	12/14/2023	18:26	ac
Sodium	96	1	mg/L		1	h	12/12/2023	08:15	ejc	EPA 200.7	12/14/2023	18:26	ac

DQF Flags Definition:
U Constituent results were non-detect.
h 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.

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January 19, 2024
Innovative Ag Services, LLC

Lab No. : VI 2348358
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	12/12/2023:213971EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	98.3%	85-115	
			MS	mg/L	12.00	186%	<¼	406
		(SP 2320268-001)	MSD	mg/L	12.00	190%	<1/4	
			MSRPD	mg/L		0.6%	≤20.0	
			MS	mg/L	12.00	308%	<¼	406
		(SP 2320269-001)	MSD	mg/L	12.00	180%	<1/4	
			MSRPD	mg/L		11.2%	≤20.0	
Magnesium	200.7	12/12/2023:213971EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	105%	85-115	
			MS	mg/L	12.00	150%	75-125	435
		(SP 2320268-001)	MSD	mg/L	12.00	152%	75-125	435
			MSRPD	mg/L		0.5%	≤20	
			MS	mg/L	12.00	199%	75-125	435
		(SP 2320269-001)	MSD	mg/L	12.00	147%	75-125	435
			MSRPD	mg/L		10.4%	≤20	
Potassium	200.7	12/12/2023:213971EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	96.3%	85-115	
			MS	mg/L	12.00	115%	75-125	
		(SP 2320268-001)	MSD	mg/L	12.00	116%	75-125	
			MSRPD	mg/L		0.5%	≤20.0	
			MS	mg/L	12.00	130%	75-125	435
		(SP 2320269-001)	MSD	mg/L	12.00	112%	75-125	
			MSRPD	mg/L		10.0%	≤20.0	
Sodium	200.7	12/12/2023:213971EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	102%	85-115	
			MS	mg/L	12.00	169%	75-125	435
		(SP 2320268-001)	MSD	mg/L	12.00	172%	75-125	435
			MSRPD	mg/L		0.6%	≤20.0	
			MS	mg/L	12.00	310%	<¼	406
		(SP 2320269-001)	MSD	mg/L	12.00	186%	<1/4	
			MSRPD	mg/L		10.9%	≤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 analyted. 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.

Page 4 of 5

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January 19, 2024
Innovative Ag Services, LLC

Lab No. : VI 2348358
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 2348599-001)	Dup	mg/L		6.29%	10	
Bicarbonate	2320B	(VI 2348599-001)	Dup	mg/L		6.52%	10	
E. C.	2320B	(VI 2348599-001)	Dup	umhos/cm		0.6%	5	
Solids, Total Dissolved	2540CE	12/12/2023:214001CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	98.9%	90-110	
		(SP 2320276-001)	Dup	mg/L		0.5%	5	
		(SP 2320276-001)	Dup	mg/L		0.8%	5	
Chloride	300.0	12/22/2023:214467LDM	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	98.7%	90-110	
			MS	mg/L	50.00	88.9%	67-117	
		(VI 2348507-001)	MSD	mg/L	50.00	90.3%	67-117	
			MSRPD	mg/L		0.7%	≤7	
			MS	mg/L	50.00	90.3%	67-117	
		(SP 2320741-001)	MSD	mg/L	50.00	87.0%	67-117	
			MSRPD	mg/L		2.1%	≤7	
Sulfate Sulfur	300.0	12/22/2023:214467LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	99.4%	90-110	
			MS	mg/L	100.0	98.5%	18-165	
		(VI 2348507-001)	MSD	mg/L	100.0	99.6%	18-165	
			MSRPD	mg/L		1.0%	≤7	
			MS	mg/L	100.0	93.2%	18-165	
		(SP 2320741-001)	MSD	mg/L	100.0	82.3%	18-165	
			MSRPD	mg/L		7.8%	≤7	435
Nitrate Nitrogen	4500NO3F	12/15/2023:214153LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	95.6%	80-120	
			MS	mg/L	5.609	92.2%	66-125	
		(STK2356868-001)	MSD	mg/L	5.609	93.9%	66-125	
			MSRPD	mg/L		0.6%	≤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 analyted. 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.

Page 5 of 5

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Laboratory Analysis Work Order

16.8°C ROI 2348358

ID# TH407

Nº 42141

ID: # 0351

LABORATORY: FGL

SITE NAME: Zomerveld Dairies

Billing: IAS

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, 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, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, 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, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time		Sampled by	IAS USE ONLY: FIELD TESTS NH_3N *	pH	Temp
1	DW1	DOM	W4	12-8	12:30	Zake			
	~~[illegible]~~				~~[illegible]~~				
2	D10				1:15				
	~~[illegible]~~				~~[illegible]~~				

* 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 sampes, please note below.

NOTES: 12/19/23 1250

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st	[illegible]	IAS		12-8-23 / 2:15
2nd	AJB	FGL	12/8/23 1535	
3rd	AJB	FGL		12/8/23 1551
4th	[illegible]	FGL	12-8-2023 1551	

LABORATORY USE ONLY

Logged In By: Rec'd GLS 12-8-2023 1730 Total Samples: _____ Laboratory #: _____

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

December 18, 2023

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

Lab No. : **VI 2348408**
Customer No. : **4018573**
Reference : **42149**

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	(4 pages)	: Results for each sample submitted.
Quality Control	(4 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
D6	12/11/2023	12/11/2023	VI 2348408-001	DW
D7	12/11/2023	12/11/2023	VI 2348408-002	DW
D8	12/11/2023	12/11/2023	VI 2348408-003	DW
D1	12/11/2023	12/11/2023	VI 2348408-004	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: 2023-12-18

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

December 18, 2023

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

Description : D6
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2348408-001
Customer No. : 4018573
Reference : 42149
Sampled On : December 11, 2023 at 08:10
Sampled By : Zeke
Received On : December 11, 2023 at 15:35
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrate Nitrogen	9.4	0.4	mg/L	10	1		12/12/2023	13:00	lfs	SM 4500-NO3 F	12/12/2023	19:28	lfs
Conductivity	426	1	umhos/cm	1600[2]	1		12/15/2023	08:07	krh	SM 4500-H+B	12/15/2023	10:57	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.

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

December 18, 2023

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

Description : D7
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2348408-002
Customer No. : 4018573
Reference : 42149
Sampled On : December 11, 2023 at 08:00
Sampled By : Zeke
Received On : December 11, 2023 at 15:35
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	110	10	mg/L		1	I	12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	21:21	amm
Bicarbonate	110	10	mg/L		1	I	12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	21:21	amm
Carbonate	10	10	mg/L		1		12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	21:21	amm
Hydroxide	10	10	mg/L		1		12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	21:21	amm
Chloride	16	1	mg/L	500[2]	1		12/12/2023	11:49	ldm	EPA 300.0	12/12/2023	22:19	ldm
Nitrate Nitrogen	7.3	0.1	mg/L	10	1	I	12/12/2023	11:49	ldm	EPA 300.0	12/12/2023	22:19	ldm
Conductivity	393	1	umhos/cm	1600[2]	1		12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	21:21	amm
Sulfate Sulfur	11.4	0.17	mg/L		1		12/12/2023	11:49	ldm	EPA 300.0	12/12/2023	22:19	ldm
Solids, Total Dissolved (TDS)	260	20	mg/L	1000[2]	1		12/13/2023	13:20	ctl	SM 2540 C	12/14/2023	11:30	ctl
Calcium	5	1	mg/L		1		12/13/2023	03:55	ejc	EPA 200.7	12/13/2023	12:48	ac
Magnesium	ND	1	mg/L		1	U	12/13/2023	03:55	ejc	EPA 200.7	12/13/2023	12:48	ac
Potassium	ND	1	mg/L		1	U	12/13/2023	03:55	ejc	EPA 200.7	12/13/2023	12:48	ac
Sodium	81	1	mg/L		1		12/13/2023	03:55	ejc	EPA 200.7	12/13/2023	12:48	ac

DQF Flags Definition:
I The RPD for the laboratory duplicate exceeded laboratory criteria.
l The MS/MSD did not meet QC criteria.
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution
MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

December 18, 2023

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

Description : D8
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2348408-003
Customer No. : 4018573
Reference : 42149
Sampled On : December 11, 2023 at 07:50
Sampled By : Zeke
Received On : December 11, 2023 at 15:35
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	110	10	mg/L		1	I	12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	21:01	amm
Bicarbonate	100	10	mg/L		1	I	12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	21:01	amm
Carbonate	10	10	mg/L		1		12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	21:01	amm
Hydroxide	10	10	mg/L		1		12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	21:01	amm
Chloride	17	1	mg/L	500[2]	1		12/12/2023	11:49	ldm	EPA 300.0	12/12/2023	21:58	ldm
Nitrate Nitrogen	7.5	0.1	mg/L	10	1	I	12/12/2023	11:49	ldm	EPA 300.0	12/12/2023	21:58	ldm
Conductivity	392	1	umhos/cm	1600[2]	1		12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	21:01	amm
Sulfate Sulfur	11.1	0.17	mg/L		1		12/12/2023	11:49	ldm	EPA 300.0	12/12/2023	21:58	ldm
Solids, Total Dissolved (TDS)	230	20	mg/L	1000[2]	1		12/13/2023	13:20	ctl	SM 2540 C	12/14/2023	11:30	ctl
Calcium	5	1	mg/L		1		12/13/2023	03:55	ejc	EPA 200.7	12/13/2023	12:41	ac
Magnesium	ND	1	mg/L		1	U	12/13/2023	03:55	ejc	EPA 200.7	12/13/2023	12:41	ac
Potassium	ND	1	mg/L		1	U	12/13/2023	03:55	ejc	EPA 200.7	12/13/2023	12:41	ac
Sodium	79	1	mg/L		1		12/13/2023	03:55	ejc	EPA 200.7	12/13/2023	12:41	ac

DQF Flags Definition:
I The RPD for the laboratory duplicate exceeded laboratory criteria.
l The MS/MSD did not meet QC criteria.
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution
MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

December 18, 2023

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

Description : D1
Project : 0351 Zonneveld Dairies Complex

Lab No. : VI 2348408-004
Customer No. : 4018573
Reference : 42149
Sampled On : December 11, 2023 at 08:20
Sampled By : Zeke
Received On : December 11, 2023 at 15:35
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	100	10	mg/L		1	I	12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	20:51	amm
Bicarbonate	100	10	mg/L		1	I	12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	20:51	amm
Carbonate	ND	10	mg/L		1	U	12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	20:51	amm
Hydroxide	ND	10	mg/L		1	U	12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	20:51	amm
Chloride	9	1	mg/L	500[2]	1		12/12/2023	11:49	ldm	EPA 300.0	12/12/2023	20:34	ldm
Nitrate Nitrogen	6.2	0.1	mg/L	10	1	I	12/12/2023	11:49	ldm	EPA 300.0	12/12/2023	20:34	ldm
Conductivity	292	1	umhos/cm	1600[2]	1		12/13/2023	17:00	amm	SM 4500-H+B	12/13/2023	20:51	amm
Sulfate Sulfur	4.4	0.17	mg/L		1		12/12/2023	11:49	ldm	EPA 300.0	12/12/2023	20:34	ldm
Solids, Total Dissolved (TDS)	170	20	mg/L	1000[2]	1		12/13/2023	13:20	ctl	SM 2540 C	12/14/2023	11:30	ctl
Calcium	4	1	mg/L		1		12/15/2023	07:10	ejc	EPA 200.7	12/15/2023	16:35	ac
Magnesium	ND	1	mg/L		1	U	12/15/2023	07:10	ejc	EPA 200.7	12/15/2023	16:35	ac
Potassium	ND	1	mg/L		1	U	12/15/2023	07:10	ejc	EPA 200.7	12/15/2023	16:35	ac
Sodium	63	1	mg/L		1		12/15/2023	07:10	ejc	EPA 200.7	12/15/2023	16:35	ac

DQF Flags Definition:
I The RPD for the laboratory duplicate exceeded laboratory criteria.
U Constituent results were non-detect.
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.

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December 18, 2023
Innovative Ag Services, LLC

Lab No. : VI 2348408
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	12/13/2023:214008EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	93.6%	85-115	
			MS	mg/L	12.00	96.1%	75-125	
		(CH 2390218-003)	MSD	mg/L	12.00	96.9%	75-125	
			MSRPD	mg/L		0.5%	≤20.0	
			MS	mg/L	12.00	93.0%	75-125	
		(CH 2390218-002)	MSD	mg/L	12.00	107%	75-125	
			MSRPD	mg/L		3.9%	≤20.0	
	200.7	12/15/2023:214106EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	101%	85-115	
			MS	mg/L	12.00	111%	75-125	
		(CH 2390218-001)	MSD	mg/L	12.00	101%	75-125	
			MSRPD	mg/L		4.3%	≤20.0	
			MS	mg/L	12.00	55.7%	<¼	406
		(SP 2320439-002)	MSD	mg/L	12.00	124%	75-125	
			MSRPD	mg/L		6.0%	≤20.0	
Magnesium	200.7	12/13/2023:214008EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	94.0%	85-115	
			MS	mg/L	12.00	94.1%	75-125	
		(CH 2390218-003)	MSD	mg/L	12.00	93.6%	75-125	
			MSRPD	mg/L		0.4%	≤20	
			MS	mg/L	12.00	95.1%	75-125	
		(CH 2390218-002)	MSD	mg/L	12.00	99.7%	75-125	
			MSRPD	mg/L		2.8%	≤20	
	200.7	12/15/2023:214106EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	100%	85-115	
			MS	mg/L	12.00	105%	75-125	
		(CH 2390218-001)	MSD	mg/L	12.00	96.6%	75-125	
			MSRPD	mg/L		6.7%	≤20	
			MS	mg/L	12.00	102%	75-125	
		(SP 2320439-002)	MSD	mg/L	12.00	113%	75-125	
			MSRPD	mg/L		2.9%	≤20	
Potassium	200.7	12/13/2023:214008EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	93.2%	85-115	
			MS	mg/L	12.00	95.6%	75-125	
		(CH 2390218-003)	MSD	mg/L	12.00	95.1%	75-125	
			MSRPD	mg/L		0.5%	≤20.0	
			MS	mg/L	12.00	99.5%	75-125	
		(CH 2390218-002)	MSD	mg/L	12.00	103%	75-125	
			MSRPD	mg/L		2.9%	≤20.0	
	200.7	12/15/2023:214106EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	98.9%	85-115	
			MS	mg/L	12.00	105%	75-125	
		(CH 2390218-001)	MSD	mg/L	12.00	98.0%	75-125	
			MSRPD	mg/L		6.5%	≤20.0	
			MS	mg/L	12.00	102%	75-125	

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December 18, 2023
Innovative Ag Services, LLC

Lab No. : VI 2348408
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
		(SP 2320439-002)	MSD	mg/L	12.00	107%	75-125	
			MSRPD	mg/L		3.9%	≤20.0	
Sodium	200.7	12/13/2023:214008EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	92.3%	85-115	
			MS	mg/L	12.00	96.8%	75-125	
		(CH 2390218-003)	MSD	mg/L	12.00	97.1%	75-125	
			MSRPD	mg/L		0.2%	≤20.0	
			MS	mg/L	12.00	99.6%	75-125	
		(CH 2390218-002)	MSD	mg/L	12.00	106%	75-125	
			MSRPD	mg/L		3.6%	≤20.0	
	200.7	12/15/2023:214106EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	102%	85-115	
			MS	mg/L	12.00	110%	75-125	
		(CH 2390218-001)	MSD	mg/L	12.00	102%	75-125	
			MSRPD	mg/L		4.5%	≤20.0	
			MS	mg/L	12.00	85.0%	75-125	
		(SP 2320439-002)	MSD	mg/L	12.00	111%	75-125	
			MSRPD	mg/L		6.8%	≤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 analyted. 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.

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December 18, 2023
Innovative Ag Services, LLC

Lab No. : VI 2348408
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO3)	2320B	12/13/2023:214042AMM	ND	mg/L		12.3%	10	406
Bicarbonate	2320B	(SP 2320358-001)	Dup	mg/L		12.4%	10	440
E. C.	2320B	(SP 2320358-001)	Dup	umhos/cm		0%	5	
	2320B	(VI 2348428-001)	Dup	umhos/cm		0.2%	5	
Solids, Total Dissolved	2540CE	12/13/2023:214037CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	99.8%	90-110	
		(VI 2348409-002)	Dup	mg/L		0.5%	5	
		(VI 2348409-002)	Dup	mg/L		0.3%	5	
Chloride	300.0	12/12/2023:214041LDM	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	98.1%	90-110	
			MS	mg/L	50.00	85.9%	67-117	
		(CH 2390217-006)	MSD	mg/L	50.00	90.5%	67-117	
			MSRPD	mg/L		2.9%	≤7	
			MS	mg/L	50.00	101%	67-117	
		(CH 2390218-003)	MSD	mg/L	50.00	101%	67-117	
			MSRPD	mg/L		0.2%	≤7	
Nitrate Nitrogen	300.0	12/12/2023:214041LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	98.3%	90-110	
			MS	mg/L	40.00	61.8%	86-112	435
		(CH 2390217-006)	MSD	mg/L	40.00	70.6%	86-112	435
			MSRPD	mg/L		3.2%	≤7	
			MS	mg/L	40.00	103%	86-112	
		(CH 2390218-003)	MSD	mg/L	40.00	103%	86-112	
			MSRPD	mg/L		0.1%	≤7	
Sulfate Sulfur	300.0	12/12/2023:214041LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	99.5%	90-110	
			MS	mg/L	100.0	93.9%	18-165	
		(CH 2390217-006)	MSD	mg/L	100.0	97.5%	18-165	
			MSRPD	mg/L		3.0%	≤7	
			MS	mg/L	100.0	102%	18-165	
		(CH 2390218-003)	MSD	mg/L	100.0	102%	18-165	
			MSRPD	mg/L		0.1%	≤7	
Nitrate Nitrogen	4500NO3F	12/12/2023:214004LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	98.1%	80-120	
			MS	mg/L	5.609	88.1%	66-125	
		(VI 2348370-001)	MSD	mg/L	5.609	90.1%	66-125	
			MSRPD	mg/L		0.6%	≤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 analyted. 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.

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

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Laboratory Analysis Work Order

Nº 42149

ID: # 0351

SITE NAME: Zomerdal Dairies

Billing: IAS

2348408
LABORATORY: FGL

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

- **W1** EC, NO_3N (Dom)
- **W2** EC, NO_3N, TDS, TN (Irr)
- **W3** NH_4-N (Ammonium)
- **W4** EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
- **W5** EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
- **W6** NO_3N, NO_2 (Dom ILRP, Annually)
- **W7** Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
- **W8** Other: _____

Process Waste Water (lagoon)

- **L1** EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
- **L2** EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
- **L3** L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, 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: _____

Plant Tissue

- **P1** TN, NO_3N, PO_4P, 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: _____

Soil

- **S1** SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
- **S2** S1 + CEC, CaCO3, OM, C:N, TN
- **S3** NO_3N, NH_4N
- **S4** Other: _____

	Sample ID	Description	Analysis	Date/Time		Sampled by	IAS USE ONLY: FIELD TESTS NH_3N *	pH	Temp
1	D6	~~[illegible]~~ DOM	W1	12-11	8:10	Zeke			
2	D7	DOM	W4		8:00				
3	D8				7:50				
4	D1				8:20				
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 sampes, please note below.

NOTES: R01 8.9°C ID#TH407

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st	[signature]	IAS		12-11-23 / 12:50
2nd	AJB	FGL	12/11/23 1535	
3rd	AJB	FGL		12/11/23 1554
4th	SRO SRO	FGL FGL GLS	12·11·23 ~~1730~~ 1554 12·11·23 12·11·23 1730 1730	

LABORATORY USE ONLY

Logged In By: _____ **Total Samples:** _____ **Laboratory #:** _____

GLS MC 12/12/23 1013