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INNOVATIVE
AG SERVICES

Meadow Lake Dairy

2023 Annual Report

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

Meadow Lake Dairy 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Facility Information:

Name of Dairy	Meadow Lake Dairy
Facility Address	6802 Avenue 120, Tipton CA 93272

Owner/Operator as of 12/31/2023

Operator Name	Clarence Bosman
Operator Phone	(559) 757-3115
Owner Name	Clarence Bosman
Owner Phone	(559) 757-3115

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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Meadow Lake Dairy 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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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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Meadow Lake Dairy 2023

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

Same as owner	DocuSigned by: Clarence Bosman 9DBCF2C6BD544A2...
Signature of Operator of Facility	Signature of Owner of Facility
Clarence Bosman	Clarence Bosman
Print Name	Print Name
	6/26/2024
Title and Date	Title and Date

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Meadow Lake Dairy 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	4,175	4,070	Milk Flushed Lane	1,400	103,292.07	1,470,694.50	252,543.50	341,676.50	2,682,903.30
Hol Dry Cows	565	550	Flushed	1,450	8,025.66	100,375.00	14,052.50	66,247.50	141,649.20
Hol Heifers(15-24)	5,260	5,128	Flushed	1,000	53,528.76	711,253.60	112,303.20	336,909.60	1,320,685.63
Hol Heifers (7-14)	4,365	4,255	Flushed	750	40,921.51	403,799.50	68,335.30	232,961.25	513,679.56
Hol Calves (4-6)	1,470	1,433	Flushed	300	4,968.93	73,226.30	20,921.80	41,843.60	34,311.75
Hol Calves (0-3)	1,450	1,413	Calves Dry Scrape	150	4,899.58	10,314.90	5,157.45	20,629.80	12,413.98
	17,285	**16,849**			**215,636.51**	**2,769,663.80**	**473,313.75**	**1,040,268.25**	**4,705,643.42**

* 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)**
79,935,471	264.75	39.12	216.50	1,975.00	176,287.09	26,051.87	144,159.22	1,315,078.3

* 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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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 1

Wheat, 116 Acres Planted on 11/01/2022

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)
10/05/2022	Corral Solids: Main Corral	4.00	Tons	35.60	2.15	0.63	2.30	%	464		12,849	3,747	13,746	0	
10/20/2022	Ground Water: Well Avg	3.60	Acre Inches		1.70			mg/L			160	0	0	18,892	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,624				
01/08/2023	Ground Water: Well Avg	4.75	Acre Inches		13.50			mg/L			1,682	0	0	47,360	
02/13/2023	Ground Water: Well Avg	4.10	Acre Inches		13.50			mg/L			1,452	0	0	40,880	
02/13/2023	Waste Water: Main Lagoon	1.10	Acre Inches		343.00	52.30	285.00	mg/L		3,464,889	9,899	1,509	8,226	53,107	
04/01/2023	Ground Water: Well Avg	4.60	Acre Inches		13.50			mg/L			1,630	0	0	45,865	
05/03/2023	Harvest	18.75	Tons	65.70	1.44	0.36	1.28	%							21,486
	Acre Inches Applied:	**18.15**						**Totals:**	**464**	**3,464,889**	**29,297**	**5,256**	**21,972**	**206,104**	**21,486**
Season Nitrogen Ratio:	1.36							**Lbs Per Acre:**			**253**	**45**	**189**	**1,777**	**185**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 1

Corn, 116 Acres Planted on 05/19/2023

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)
05/05/2023	Ground Water: Well Avg	4.80	Acre Inches		13.50			mg/L			1,701	0	0	47,859	
05/05/2023	Waste Water: Main Lagoon	1.90	Acre Inches		266.00	45.40	242.00	mg/L		5,984,808	13,261	2,263	12,064	100,704	
05/25/2023	Ground Water: Well Avg	4.10	Acre Inches		13.50			mg/L			1,452	0	0	40,880	
05/25/2023	Waste Water: Main Lagoon	1.40	Acre Inches		266.00	45.40	242.00	mg/L		4,409,858	9,772	1,668	8,889	74,203	
06/10/2023	Ground Water: Well Avg	4.75	Acre Inches		13.50			mg/L			1,682	0	0	47,360	
06/10/2023	Waste Water: Main Lagoon	1.20	Acre Inches		266.00	45.40	242.00	mg/L		3,779,879	8,375	1,429	7,620	63,603	
07/15/2023	Ground Water: Well Avg	4.40	Acre Inches		13.50			mg/L			1,559	0	0	43,871	
07/15/2023	Waste Water: Main Lagoon	1.30	Acre Inches		229.00	30.20	137.00	mg/L		4,094,868	7,811	1,030	4,674	67,198	
07/30/2023	Ground Water: Well Avg	4.90	Acre Inches		13.50			mg/L			1,735	0	0	48,857	
07/30/2023	Waste Water: Main Lagoon	1.20	Acre Inches		229.00	30.20	137.00	mg/L		3,779,879	7,211	951	4,314	62,029	
08/18/2023	Ground Water: Well Avg	4.20	Acre Inches		13.50			mg/L			1,488	0	0	41,877	
09/01/2023	Ground Water: Well Avg	3.80	Acre Inches		13.50			mg/L			1,346	0	0	37,889	
09/20/2023	Harvest	28.90	Tons	38.20	1.73	0.34	1.53	%							71,683
	Acre Inches Applied:	**37.95**						**Totals:**		**22,049,292**	**57,393**	**7,342**	**37,561**	**676,330**	**71,683**
Season Nitrogen Ratio:	0.80							**Lbs Per Acre:**			**495**	**63**	**324**	**5,830**	**618**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2

Wheat, 99 Acres Planted on 11/01/2022

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)
10/12/2022	Corral Solids: Main Corral	3.00	Tons	35.60	2.15	0.63	2.30	%	297		8,225	2,399	8,798	0	
10/15/2022	Ground Water: Well Avg	4.50	Acre Inches		1.70			mg/L			171	0	0	20,154	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,386				
01/18/2023	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			1,541	0	0	43,399	
01/18/2023	Waste Water: Main Lagoon	0.30	Acre Inches		343.00	52.30	285.00	mg/L		806,483	2,305	351	1,915	12,361	
02/25/2023	Ground Water: Well Avg	4.90	Acre Inches		13.50			mg/L			1,481	0	0	41,697	
04/15/2023	Ground Water: Well Avg	5.30	Acre Inches		13.50			mg/L			1,602	0	0	45,100	
05/11/2023	Harvest	17.30	Tons	65.40	1.07	0.32	1.36	%							12,682
	Acre Inches Applied:	**20.10**						**Totals:**	**297**	**806,483**	**16,711**	**2,750**	**10,713**	**162,711**	**12,682**
Season Nitrogen Ratio:	1.32							**Lbs Per Acre:**			**169**	**28**	**108**	**1,644**	**128**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 2

Corn, 99 Acres Planted on 06/05/2023

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	Ground Water: Well Avg	4.80	Acre Inches		13.50			mg/L			1,451	0	0	40,845	
05/20/2023	Waste Water: Main Lagoon	0.50	Acre Inches		266.00	45.40	242.00	mg/L		1,344,138	2,978	508	2,710	22,618	
06/13/2023	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			1,541	0	0	43,399	
06/13/2023	Waste Water: Main Lagoon	0.55	Acre Inches		266.00	45.40	242.00	mg/L		1,478,552	3,276	559	2,981	24,879	
06/30/2023	Ground Water: Well Avg	4.90	Acre Inches		13.50			mg/L			1,481	0	0	41,697	
07/12/2023	Ground Water: Well Avg	5.25	Acre Inches		13.50			mg/L			1,587	0	0	44,675	
07/12/2023	Waste Water: Main Lagoon	0.80	Acre Inches		229.00	30.20	137.00	mg/L		2,150,621	4,103	541	2,454	35,292	
07/30/2023	Ground Water: Well Avg	5.60	Acre Inches		13.50			mg/L			1,693	0	0	47,653	
07/30/2023	Waste Water: Main Lagoon	1.00	Acre Inches		229.00	30.20	137.00	mg/L		2,688,276	5,128	676	3,068	44,114	
08/15/2023	Ground Water: Well Avg	5.50	Acre Inches		13.50			mg/L			1,663	0	0	46,802	
09/01/2023	Ground Water: Well Avg	4.90	Acre Inches		13.50			mg/L			1,481	0	0	41,697	
09/27/2023	Harvest	32.60	Tons	69.30	1.00	0.18	0.44	%							19,816
	Acre Inches Applied:	**38.90**						**Totals:**		**7,661,586**	**26,383**	**2,284**	**11,213**	**433,670**	**19,816**
Season Nitrogen Ratio:	1.33							**Lbs Per Acre:**			**266**	**23**	**113**	**4,380**	**200**

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Nutrient Applications (Attachment B)

Field Name: 14

Wheat, 73 Acres Planted on 10/17/2022

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)
09/05/2022	Corral Solids: Main Corral	4.00	Tons	35.60	2.15	0.63	2.30	%	292		8,086	2,358	8,650	0	
09/20/2022	Ground Water: Well Avg	4.20	Acre Inches		1.70			mg/L			118	0	0	13,870	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,022				
01/15/2023	Ground Water: Well Avg	4.80	Acre Inches		13.50			mg/L			1,070	0	0	30,118	
01/15/2023	Waste Water: Main Lagoon	1.20	Acre Inches		343.00	52.30	285.00	mg/L		2,378,717	6,796	1,037	5,647	36,459	
02/25/2023	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			1,137	0	0	32,001	
04/01/2023	Ground Water: Well Avg	5.30	Acre Inches		13.50			mg/L			1,181	0	0	33,256	
05/08/2023	Harvest	17.20	Tons	67.20	1.69	0.36	1.31	%							13,920
	Acre Inches Applied:	**20.60**						**Totals:**	**292**	**2,378,717**	**19,411**	**3,394**	**14,298**	**145,704**	**13,920**
Season Nitrogen Ratio:	1.39							**Lbs Per Acre:**			**266**	**46**	**196**	**1,996**	**191**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 14

Milo, 73 Acres Planted on 06/01/2023

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	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			1,137	0	0	32,001	
06/15/2023	Ground Water: Well Avg	4.80	Acre Inches		13.50			mg/L			1,070	0	0	30,118	
06/15/2023	Waste Water: Main Lagoon	0.75	Acre Inches		266.00	45.40	242.00	mg/L		1,486,698	3,294	562	2,997	25,016	
06/28/2023	Ground Water: Well Avg	5.50	Acre Inches		13.50			mg/L			1,226	0	0	34,511	
07/20/2023	Ground Water: Well Avg	5.25	Acre Inches		13.50			mg/L			1,170	0	0	32,942	
07/20/2023	Waste Water: Main Lagoon	0.90	Acre Inches		229.00	30.20	137.00	mg/L		1,784,038	3,403	449	2,036	29,276	
08/16/2023	Ground Water: Well Avg	4.90	Acre Inches		13.50			mg/L			1,092	0	0	30,746	
08/16/2023	Waste Water: Main Lagoon	0.85	Acre Inches		229.00	30.20	137.00	mg/L		1,684,924	3,214	424	1,923	27,649	
09/25/2023	Ground Water: Well Avg	5.60	Acre Inches		13.50			mg/L			1,248	0	0	35,138	
11/07/2023	Harvest	25.10	Tons	73.50	1.30	0.25	1.58	%							12,625
	Acre Inches Applied:	**33.65**						**Totals:**		**4,955,660**	**16,856**	**1,435**	**6,955**	**277,398**	**12,625**
Season Nitrogen Ratio:	1.34							**Lbs Per Acre:**			**231**	**20**	**95**	**3,800**	**173**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 15A

Wheat, 67 Acres Planted on 12/09/2022

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)
10/18/2022	Corral Solids: Main Corral	7.00	Tons	35.60	2.15	0.63	2.30	%	469		12,987	3,788	13,894	0	
10/21/2022	Ground Water: Well Avg	4.50	Acre Inches		1.70			mg/L			116	0	0	13,640	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			938				
01/20/2023	Ground Water: Well Avg	3.10	Acre Inches		13.50			mg/L			634	0	0	17,853	
02/01/2023	Ground Water: Well Avg	3.80	Acre Inches		13.50			mg/L			777	0	0	21,884	
02/01/2023	Waste Water: Main Lagoon	0.95	Acre Inches		343.00	52.30	285.00	mg/L		1,728,371	4,939	753	4,103	26,491	
02/23/2023	Ground Water: Well Avg	3.75	Acre Inches		13.50			mg/L			767	0	0	21,596	
03/05/2023	Ground Water: Well Avg	3.00	Acre Inches		13.50			mg/L			614	0	0	17,277	
04/19/2023	Ground Water: Well Avg	3.60	Acre Inches		13.50			mg/L			736	0	0	20,732	
05/26/2023	Harvest	19.80	Tons	49.70	2.10	0.20	0.74	%							28,025
	Acre Inches Applied:	**22.70**						**Totals:**	**469**	**1,728,371**	**22,509**	**4,541**	**17,997**	**139,473**	**28,025**
Season Nitrogen Ratio:	0.80							**Lbs Per Acre:**			**336**	**68**	**269**	**2,082**	**418**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 15A

Corn, 67 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)
05/30/2023	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			1,043	0	0	29,371	
06/23/2023	Ground Water: Well Avg	5.50	Acre Inches		13.50			mg/L			1,126	0	0	31,674	
06/23/2023	Waste Water: Main Lagoon	1.10	Acre Inches		266.00	45.40	242.00	mg/L		2,001,272	4,434	757	4,034	33,675	
07/04/2023	Ground Water: Well Avg	5.90	Acre Inches		13.50			mg/L			1,207	0	0	33,978	
07/04/2023	Waste Water: Main Lagoon	0.80	Acre Inches		229.00	30.20	137.00	mg/L		1,455,470	2,776	366	1,661	23,884	
07/27/2023	Ground Water: Well Avg	5.60	Acre Inches		13.50			mg/L			1,146	0	0	32,250	
07/27/2023	Waste Water: Main Lagoon	0.50	Acre Inches		229.00	30.20	137.00	mg/L		909,669	1,735	229	1,038	14,928	
08/09/2023	Ground Water: Well Avg	5.75	Acre Inches		13.50			mg/L			1,177	0	0	33,114	
08/09/2023	Waste Water: Main Lagoon	0.75	Acre Inches		229.00	30.20	137.00	mg/L		1,364,504	2,603	343	1,557	22,391	
08/24/2023	Ground Water: Well Avg	5.20	Acre Inches		13.50			mg/L			1,064	0	0	29,946	
09/02/2023	Ground Water: Well Avg	5.40	Acre Inches		13.50			mg/L			1,105	0	0	31,098	
10/10/2023	Harvest	31.80	Tons	67.60	1.16	0.24	0.81	%							16,015
	Acre Inches Applied:	**41.60**						**Totals:**		**5,730,915**	**19,416**	**1,695**	**8,290**	**316,309**	**16,015**
Season Nitrogen Ratio:	1.21							**Lbs Per Acre:**			**290**	**25**	**124**	**4,721**	**239**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 15B

Wheat, 76 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)
10/03/2022	Corral Solids: Main Corral	7.00	Tons	35.60	2.15	0.63	2.30	%	532		14,732	4,296	15,760	0	
10/08/2022	Ground Water: Well Avg	3.10	Acre Inches		1.70			mg/L			90	0	0	10,658	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,064				
01/18/2023	Ground Water: Well Avg	3.80	Acre Inches		13.50			mg/L			882	0	0	24,824	
02/10/2023	Ground Water: Well Avg	4.90	Acre Inches		13.50			mg/L			1,137	0	0	32,010	
02/10/2023	Waste Water: Main Lagoon	0.75	Acre Inches		343.00	52.30	285.00	mg/L		1,547,795	4,422	674	3,675	23,723	
03/18/2023	Ground Water: Well Avg	3.75	Acre Inches		13.50			mg/L			870	0	0	24,497	
04/20/2023	Ground Water: Well Avg	5.20	Acre Inches		13.50			mg/L			1,207	0	0	33,969	
05/26/2023	Harvest	21.60	Tons	42.90	2.56	0.20	0.77	%							47,992
	Acre Inches Applied:	**21.50**						**Totals:**	**532**	**1,547,795**	**24,404**	**4,970**	**19,435**	**149,681**	**47,992**
Season Nitrogen Ratio:	0.51							**Lbs Per Acre:**			**321**	**65**	**256**	**1,969**	**631**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 15B

Corn, 76 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)
05/30/2023	Ground Water: Well Avg	4.90	Acre Inches		13.50			mg/L			1,137	0	0	32,010	
06/23/2023	Ground Water: Well Avg	5.60	Acre Inches		13.50			mg/L			1,300	0	0	36,582	
06/23/2023	Waste Water: Main Lagoon	0.90	Acre Inches		266.00	45.40	242.00	mg/L		1,857,354	4,115	702	3,745	31,253	
07/08/2023	Ground Water: Well Avg	5.40	Acre Inches		13.50			mg/L			1,253	0	0	35,275	
07/08/2023	Waste Water: Main Lagoon	0.75	Acre Inches		229.00	30.20	137.00	mg/L		1,547,795	2,953	389	1,766	25,399	
07/24/2023	Ground Water: Well Avg	5.25	Acre Inches		13.50			mg/L			1,218	0	0	34,296	
07/24/2023	Waste Water: Main Lagoon	0.60	Acre Inches		229.00	30.20	137.00	mg/L		1,238,236	2,362	312	1,413	20,319	
08/03/2023	Ground Water: Well Avg	5.75	Acre Inches		13.50			mg/L			1,335	0	0	37,562	
08/30/2023	Ground Water: Well Avg	5.50	Acre Inches		13.50			mg/L			1,277	0	0	35,929	
09/15/2023	Ground Water: Well Avg	5.70	Acre Inches		13.50			mg/L			1,323	0	0	37,235	
10/10/2023	Harvest	31.00	Tons	68.50	1.13	0.23	0.80	%							16,772
	Acre Inches Applied:	**40.35**						**Totals:**		**4,643,385**	**18,273**	**1,403**	**6,924**	**325,861**	**16,772**
Season Nitrogen Ratio:	1.09							**Lbs Per Acre:**			**240**	**18**	**91**	**4,288**	**221**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 23

Wheat, 138 Acres Planted on 11/14/2022

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)
10/06/2022	Corral Solids: Main Corral	8.00	Tons	35.60	2.15	0.63	2.30	%	1,104		30,573	8,916	32,705	0	
10/09/2022	Ground Water: Well Avg	4.20	Acre Inches		1.70			mg/L			224	0	0	26,220	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,932				
01/07/2023	Ground Water: Well Avg	4.20	Acre Inches		13.50			mg/L			1,771	0	0	49,819	
02/12/2023	Ground Water: Well Avg	4.20	Acre Inches		13.50			mg/L			1,771	0	0	49,819	
02/12/2023	Waste Water: Main Lagoon	0.50	Acre Inches		343.00	52.30	285.00	mg/L		1,873,647	5,353	817	4,448	28,718	
03/09/2023	Ground Water: Well Avg	4.20	Acre Inches		13.50			mg/L			1,771	0	0	49,819	
04/17/2023	Ground Water: Well Avg	4.20	Acre Inches		13.50			mg/L			1,771	0	0	49,819	
05/26/2023	Harvest	17.50	Tons	65.60	2.76	0.30	1.48	%							45,857
	Acre Inches Applied:	**21.50**						**Totals:**	**1,104**	**1,873,647**	**45,163**	**9,733**	**37,152**	**254,215**	**45,857**
Season Nitrogen Ratio:	0.98							**Lbs Per Acre:**			**327**	**71**	**269**	**1,842**	**332**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 23

Corn, 138 Acres Planted on 06/01/2023

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)
06/08/2023	Ground Water: Well Avg	5.50	Acre Inches		13.50			mg/L			2,318	0	0	65,240	
06/08/2023	Waste Water: Main Lagoon	0.50	Acre Inches		266.00	45.40	242.00	mg/L		1,873,647	4,151	708	3,777	31,527	
06/28/2023	Ground Water: Well Avg	5.75	Acre Inches		13.50			mg/L			2,423	0	0	68,205	
06/28/2023	Waste Water: Main Lagoon	0.90	Acre Inches		266.00	45.40	242.00	mg/L		3,372,564	7,473	1,275	6,799	56,748	
07/06/2023	Ground Water: Well Avg	5.40	Acre Inches		13.50			mg/L			2,276	0	0	64,053	
07/24/2023	Ground Water: Well Avg	5.80	Acre Inches		13.50			mg/L			2,444	0	0	68,797	
07/24/2023	Waste Water: Main Lagoon	0.75	Acre Inches		229.00	30.20	137.00	mg/L		2,810,470	5,361	707	3,207	46,120	
08/07/2023	Ground Water: Well Avg	5.90	Acre Inches		13.50			mg/L			2,487	0	0	69,984	
08/31/2023	Ground Water: Well Avg	5.60	Acre Inches		13.50			mg/L			2,360	0	0	66,425	
09/02/2023	Ground Water: Well Avg	5.40	Acre Inches		13.50			mg/L			2,276	0	0	64,053	
09/27/2023	Harvest	32.20	Tons	71.90	0.96	0.20	0.42	%							23,949
	Acre Inches Applied:	**41.50**						**Totals:**		**8,056,681**	**33,568**	**2,690**	**13,783**	**601,151**	**23,949**
Season Nitrogen Ratio:	1.40							**Lbs Per Acre:**			**243**	**19**	**100**	**4,356**	**174**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 24

Wheat, 156 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)
09/08/2022	Corral Solids: Main Corral	8.00	Tons	35.60	2.15	0.63	2.30	%	1,248		34,560	10,079	36,970	0	
09/12/2022	Ground Water: Well Avg	3.50	Acre Inches		1.70			mg/L			211	0	0	24,701	
11/18/2022	Ground Water: Well Avg	3.70	Acre Inches		1.70			mg/L			222	0	0	26,111	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			2,184				
01/08/2023	Ground Water: Well Avg	3.40	Acre Inches		13.50			mg/L			1,619	0	0	45,589	
02/15/2023	Ground Water: Well Avg	3.25	Acre Inches		13.50			mg/L			1,548	0	0	43,579	
03/06/2023	Ground Water: Well Avg	3.00	Acre Inches		13.50			mg/L			1,429	0	0	40,226	
04/15/2023	Ground Water: Well Avg	3.80	Acre Inches		13.50			mg/L			1,810	0	0	50,954	
05/26/2023	Harvest	18.70	Tons	66.80	2.06	0.32	1.67	%							39,903
	Acre Inches Applied:	**20.65**						**Totals:**	**1,248**		**43,582**	**10,079**	**36,970**	**231,161**	**39,903**
Season Nitrogen Ratio:	1.09							**Lbs Per Acre:**			**279**	**65**	**237**	**1,482**	**256**

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Meadow Lake Dairy 2023

Nutrient Applications (Attachment B)

Field Name: 24

Corn, 156 Acres Planted on 06/01/2023

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	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			2,429	0	0	68,386	
06/10/2023	Waste Water: Main Lagoon	0.75	Acre Inches		266.00	45.40	242.00	mg/L		3,177,053	7,040	1,201	6,404	53,460	
06/23/2023	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			2,429	0	0	68,386	
06/23/2023	Waste Water: Main Lagoon	0.80	Acre Inches		266.00	45.40	242.00	mg/L		3,388,857	7,508	1,282	6,831	57,023	
07/08/2023	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			2,429	0	0	68,386	
07/08/2023	Waste Water: Main Lagoon	1.10	Acre Inches		229.00	30.20	137.00	mg/L		4,659,678	8,889	1,172	5,318	76,467	
07/28/2023	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			2,429	0	0	68,386	
07/28/2023	Waste Water: Main Lagoon	0.90	Acre Inches		229.00	30.20	137.00	mg/L		3,812,464	7,273	959	4,351	62,562	
08/15/2023	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			2,429	0	0	68,386	
09/01/2023	Ground Water: Well Avg	5.10	Acre Inches		13.50			mg/L			2,429	0	0	68,386	
09/20/2023	Harvest	31.60	Tons	32.80	1.52	0.29	1.25	%							100,706
	Acre Inches Applied:	**34.15**						**Totals:**		**15,038,051**	**45,284**	**4,614**	**22,904**	**659,825**	**100,706**
Season Nitrogen Ratio:	0.45							**Lbs Per Acre:**			**290**	**30**	**147**	**4,230**	**646**

Season Notes: The crop for this season was budgeted to a 1.4 nitrogen ratio using the historical 3-year average for the following: yield, plant tissue nitrogen extraction, wastewater nitrogen content, irrigation water, and manure nitrogen content. The nitrogen ratio for this crop is below .80 due to the variances between the budgeted and actual amounts.

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Meadow Lake Dairy 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	122,012.33	35,582.60	130,523.60	0.00	4,406.00	tons
Process Wastewater	174,215.25	26,604.28	135,642.77	1,313,195.71	79,935,470.62	gallons
Irrigation Water	111,871.59					
Fertilizer / Total Imports	0.00					
Atmospheric Deposition	10,150.00					
Total Nitrogen Applied	**418,249.17**					
Crop Nitrogen Removal	471,431.93					
Nitrogen Balance	**(53,182.76)**					
Nitrogen Ratio	**0.89**					

- **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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Meadow Lake Dairy 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

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Meadow Lake Dairy 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)**
18,980	259,077.00	123,113.39	286,021.01	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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Meadow Lake Dairy 2023

Land Application Area Description Technical Report (Attachment D)

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
1	x293 x050 x005 xxxx	116	Both
2	x293 x050 x005 xxxx	99	Both
14	x293 x190 x030 xxxx	73	Both
15A	x293 x180 x011 xxxx	67	Both
15B	x293 x180 x011 xxxx	76	Both
23	x293 x180 x009 xxxx, x293 x180 x012 xxxx	138	Both
24	x293 x180 x009 xxxx, x293 x180 x012 xxxx	156	Both
		725	

Production Area APN(s): x293 x050 x001 xxxx, x293 x050 x002 xxxx, x293 x050 x005 xxxx

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Meadow Lake Dairy 2023
Lab Results Summary (Attachment E)

Process Wastewater
(mgl/ppm unless noted otherwise)

Sample Date:	TKN	TP	TK	EC (umhos/cm)	NH4N	NO3N	TDS	pH (units)	General Minerals CA	MG	NA	HCO3	CO3	SO4	CL
03/09/2023	343.00	52.30	285.00	2,770	88.10		1,840.00								
06/16/2023	266.00	45.40	242.00	3,040	122.00	0.00	2,020.00	7.17							
07/10/2023	229.00	30.20	137.00	2,970	108.00		1,970.00								
11/01/2023	221.00	28.60	202.00	3,120	213.00		2,070.00								
Averages:	264.75	39.12	216.50	2,975	132.78	0.00	1,975.00	7.17							

Manure - Corral Solids
(Dry Weight Basis)

Sample Date:	TN	TP	TK	Moisture	Ash	CA	MG	NA	S	CL
06/12/2023	1.25	0.59	1.38	45.40						%
11/01/2023	2.74	0.75	2.89	61.20						%
Averages:	2.00	0.67	2.14	53.30						

Plant Tissue
(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
1	1	Wheat	05/03/2023	28.80	7.28	25.60	65.70	8.40
1	2	Corn	09/20/2023	34.60	6.72	30.60	38.20	7.46

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Meadow Lake Dairy 2023

Lab Results Summary (Attachment E)

Plant Tissue

(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
2	1	Wheat	05/11/2023	21.40	6.32	27.20	65.40	7.57
2	2	Corn	09/27/2023	20.00	3.70	8.76	69.30	5.42
14	1	Wheat	05/08/2023	33.80	7.16	26.20	67.20	9.78
14	2	Milo	11/07/2023	26.00	5.06	31.60	73.50	11.90
15A	1	Wheat	05/26/2023	42.00	3.98	14.90	49.70	8.16
15A	2	Corn	10/10/2023	23.20	4.76	16.14	67.60	6.03
15B	1	Wheat	05/26/2023	51.20	4.00	15.34	42.90	8.09
15B	2	Corn	10/10/2023	22.60	4.52	16.10	68.50	6.40
23	1	Wheat	05/26/2023	55.20	5.98	29.60	65.60	11.00
23	2	Corn	09/27/2023	19.18	3.90	8.32	71.90	5.88
24	1	Wheat	05/26/2023	41.20	6.50	33.40	66.80	11.10
24	2	Corn	09/20/2023	30.40	5.78	25.00	32.80	7.19

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
Dairy													

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Meadow Lake Dairy 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**
Dairy														
East Barn							Out of service							
N Dairy	03/28/2023	0.00		188										
	Averages:	0.00		188										
Domestic														
DE Dairy 2							Did not Run							
E Dom							Out of service							
E1 Dom	02/28/2023	46.10		1,340		920.00		156.00	14.00	101.00	370.00	0.00	19.00	99.00
E4 Dom	03/28/2023	34.80		1,140										
West Barn Dairy 1	08/16/2023	0.00		201										
West Barn Dairy 2							Out of service							
	Averages:	26.97		894		920.00		156.00	14.00	101.00	370.00	0.00	19.00	99.00

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Meadow Lake Dairy 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														
DE Dairy							Out of service							
E1	07/11/2023	37.80		1,030		760.00	37.80	106.00	8.00	71.00	180.00	0.00	18.00	105.00
E15B							Out of service							
NE15	08/16/2023	0.20		220		150.00	0.80	4.00	0.00	46.00	70.00	10.00	3.10	14.00
NE16	08/16/2023	2.50		389		230.00	2.50							
NE18							Out of service							
NE24							Out of service							
NE24A							Did not Run							
NW1							Out of service							
	Averages:	13.50		546		380.00	13.70	55.00	4.00	58.50	125.00	5.00	10.55	59.50

* NH4N was non-detectable unless a value is shown

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Meadow Lake Dairy 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: 1								
	1	Wheat	116	11/01/2022	05/03/2023	18.0	2175.0	18.8
	2	Corn	116	05/19/2023	09/20/2023	28.8	3352.4	28.9
Field: 2								
	1	Wheat	99	11/01/2022	05/11/2023	18.3	1712.7	17.3
	2	Corn	99	06/05/2023	09/27/2023	30.2	3227.4	32.6
Field: 14								
	1	Wheat	73	10/17/2022	05/08/2023	18.5	1255.6	17.2
	2	Milo	73	06/01/2023	11/07/2023	26.3	1832.3	25.1
Field: 15A								
	1	Wheat	67	12/09/2022	05/26/2023	19.0	1326.6	19.8
	2	Corn	67	06/15/2023	10/10/2023	30.5	2130.6	31.8
Field: 15B								
	1	Wheat	76	11/21/2022	05/26/2023	19.3	1641.6	21.6
	2	Corn	76	06/15/2023	10/10/2023	29.8	2356.0	31.0
Field: 23								
	1	Wheat	138	11/14/2022	05/26/2023	18.1	2415.0	17.5
	2	Corn	138	06/01/2023	09/27/2023	29.7	4443.6	32.2
Field: 24								
	1	Wheat	156	10/19/2022	05/26/2023	18.2	2917.2	18.7
	2	Corn	156	06/01/2023	09/20/2023	30.2	4929.6	31.6

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Meadow Lake Dairy 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

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Manure/Process Wastewater Tracking Manifest

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: Clarence Bosman

Name of Dairy Facility: Meadowlake Dairy

Facility Address: 6802 Avenue 120 (Number and Street) Tipton (City) 93272 (Zip Code)

Contact Person Name and Phone Number: Clarence Bosman (Name) 559-967-4295 (Phone Number)

Manure/Process Wastewater Hauler Information:

Name of Hauling Company/Person: Gutierrez Spreading

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

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

Destination Information:

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

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

Name	Number and Street	City	Zip Code	Phone Number
Williams Family Dairy	6801 Avenue 120	Pixley	93256	559-799-8800

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

Number and Street	City	Zip Code	Assessor's Parcel Number
Compost Pile			

Dates Hauled: 4/11/2023-4/29/2023

Innovative Ag Services, LLC
1201 Delta View Road, Suite 5 Hanford, CA 93230
Office (559) 587-2800 Fax (559) 587-2801

DocuSign Envelope ID: D4B7D89C-057C-4B80-82EA-ED24940D8F26

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: 18,980 Tons or Cubic Yards (indicate which units used)
Manure Solids Content (if amount reported in tons): 54.6% Corral Solids
Manure Density (if amount reported in cubic yards): _____

Method used to determine amount of manure: _____
20 tons/semi load, 10 tons/10-wheeler load

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

Process Wastewater: 0 _____ Gallons
Method used to determine volume of process wastewater: _____
_____

Written Agreement:

Does the Operator have a written agreement (in compliance with Land Application Specification C.2 of 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: Clarence Bowman Date: 5-15-23

Hauler's Signature: _____ Date: 5/1/23

Innovative Ag Services, LLC
1201 Delta View Road, Suite 5 Hanford, CA 93230
Office (559) 587-2800 Fax (559) 587-2801

DocuSign Envelope ID: D4B7D89C-057C-4B80-82EA-ED24940D8F26

ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

March 9, 2023

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

Lab No. : **VI 2341244**
Customer No. : **4018573**
Reference : **40165**

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	(1 page)	: 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
E1 Dom	02/28/2023	02/28/2023	VI 2341244-001	DW

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)
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)

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: 2023-03-14

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CA ELAP Certification No. 1563

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

March 9, 2023

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

Description : E1 Dom
Project : 0222 Meadow Lake Dairy

Lab No. : VI 2341244-001
Customer No. : 4018573
Reference : 40165
Sampled On : February 28, 2023 at 11:30
Sampled By : Sean
Received On : February 28, 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)	300	10	mg/L		1		03/06/2023	13:57	amm	SM 4500-H+B	03/07/2023	00:57	amm
Bicarbonate	370	10	mg/L		1		03/06/2023	13:57	amm	SM 4500-H+B	03/07/2023	00:57	amm
Carbonate	ND	10	mg/L		1	U	03/06/2023	13:57	amm	SM 4500-H+B	03/07/2023	00:57	amm
Hydroxide	ND	10	mg/L		1	U	03/06/2023	13:57	amm	SM 4500-H+B	03/07/2023	00:57	amm
Chloride	99	1	mg/L	500[2]	1		03/01/2023	13:30	ldm	EPA 300.0	03/01/2023	21:32	ldm
Nitrate Nitrogen	46.1	0.5*	mg/L	10	5		03/01/2023	13:30	ldm	EPA 300.0	03/02/2023	04:52	ldm
Conductivity	1340	1	umhos/cm	1600[2]	1		03/06/2023	13:57	amm	SM 4500-H+B	03/07/2023	00:57	amm
Sulfate Sulfur	19.0	0.17	mg/L		1		03/01/2023	13:30	ldm	EPA 300.0	03/01/2023	21:32	ldm
Solids, Total Dissolved (TDS)	920	20	mg/L	1000[2]	1		03/02/2023	14:15	ctl	SM 2540 C	03/03/2023	11:00	ctl
Calcium	156	1	mg/L		1		03/03/2023	07:12	ejc	EPA 200.7	03/03/2023	21:12	ac
Magnesium	14	1	mg/L		1		03/03/2023	07:12	ejc	EPA 200.7	03/03/2023	21:12	ac
Potassium	ND	1	mg/L		1	J	03/03/2023	07:12	ejc	EPA 200.7	03/03/2023	21:12	ac
Sodium	101	1	mg/L		1		03/03/2023	07:12	ejc	EPA 200.7	03/03/2023	21:12	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.

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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CA ELAP Certification No. 2775

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CA ELAP Certification No. 2810

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

March 9, 2023
Innovative Ag Services, LLC

Lab No. : VI 2341244
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	03/03/2023:202328EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	97.4 %	85-115	
			MS	mg/L	12.00	83.1 %	75-125	
		(SP 2302264-002)	MSD	mg/L	12.00	90.7 %	75-125	
			MSRPD	mg/L	No Ref.	1.0%	≤20.0	
			MS	mg/L	12.00	102 %	75-125	
		(CC 2380581-001)	MSD	mg/L	12.00	70.8 %	<¼	
			MSRPD	mg/L	0.8000	3.7%	≤20.0	
Magnesium	200.7	03/03/2023:202328EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	98.6 %	85-115	
			MS	mg/L	12.00	89.4 %	75-125	
		(SP 2302264-002)	MSD	mg/L	12.00	92.6 %	75-125	
			MSRPD	mg/L	No Ref.	0.8%	≤20	
			MS	mg/L	12.00	101 %	75-125	
		(CC 2380581-001)	MSD	mg/L	12.00	89.3 %	75-125	
			MSRPD	mg/L	0.8000	2.9%	≤20	
Potassium	200.7	03/03/2023:202328EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	98.2 %	85-115	
			MS	mg/L	12.00	114 %	75-125	
		(SP 2302264-002)	MSD	mg/L	12.00	118 %	75-125	
			MSRPD	mg/L	No Ref.	1.4%	≤20.0	
			MS	mg/L	12.00	109 %	75-125	
		(CC 2380581-001)	MSD	mg/L	12.00	104 %	75-125	
			MSRPD	mg/L	0.8000	2.0%	≤20.0	
Sodium	200.7	03/03/2023:202328EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	96.0 %	85-115	
			MS	mg/L	12.00	41.6 %	<¼	
		(SP 2302264-002)	MSD	mg/L	12.00	60.5 %	<¼	
			MSRPD	mg/L	No Ref.	1.9%	≤20.0	
			MS	mg/L	12.00	84.0 %	75-125	
		(CC 2380581-001)	MSD	mg/L	12.00	44.5 %	<¼	
			MSRPD	mg/L	0.8000	3.7%	≤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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March 9, 2023
Innovative Ag Services, LLC

Lab No. : VI 2341244
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO3)	2320B	03/06/2023:202435AMM	ND	mg/L		1.43%	10	
Bicarbonate	2320B	(CC 2380676-001)	Dup	mg/L		1.59%	10	
E. C.	2320B	(CC 2380676-001)	Dup	umhos/cm		0%	5	
Solids, Total Dissolved	2540CE	03/02/2023:202282CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	992.0	99.8%	90-110	
		(SP 2302960-001)	Dup	mg/L		2.31%	5	
		(SP 2302960-001)	Dup	mg/L		0.8%	5	
Chloride	300.0	03/01/2023:202292LDM	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	94.6 %	90-110	
			MS	mg/L	50.00	92.8 %	85-121	
		(STK2332430-001)	MSD	mg/L	50.00	94.7 %	85-121	
			MSRPD	mg/L	10.00	1.7%	≤19	
			MS	mg/L	50.00	92.1 %	85-121	
		(STK2332435-001)	MSD	mg/L	50.00	97.9 %	85-121	
			MSRPD	mg/L	10.00	5.6%	≤19	
Nitrate Nitrogen	300.0	03/01/2023:202292LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	93.9 %	90-110	
			MS	mg/L	40.00	92.6 %	85-119	
		(STK2332430-001)	MSD	mg/L	40.00	94.4 %	85-119	
			MSRPD	mg/L	10.00	1.5%	≤19	
			MS	mg/L	40.00	92.5 %	85-119	
		(STK2332435-001)	MSD	mg/L	40.00	98.3 %	85-119	
			MSRPD	mg/L	10.00	6.1%	≤19	
Sulfate Sulfur	300.0	03/01/2023:202292LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	93.7 %	90-110	
			MS	mg/L	100.0	86.1 %	82-124	
		(STK2332430-001)	MSD	mg/L	100.0	88.1 %	82-124	
			MSRPD	mg/L	10.00	1.3%	≤23	
			MS	mg/L	100.0	91.0 %	82-124	
		(STK2332435-001)	MSD	mg/L	100.0	96.8 %	82-124	
			MSRPD	mg/L	10.00	5.5%	≤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.

Page 4 of 4

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Laboratory Analysis Work Order

Nº 40165

ID: # 0222 2341244 LABORATORY: FGL

SITE NAME: MEADOW LAKE DAIRY

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) Bal W.C

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	E 1Dom	Dom	W4	2/28/23 11:30	SEAN	0		
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:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st		IAS		2/29/23 1:30
2nd	AJR	FGL	2/28/23 1535	
3rd	AJR	FGL		2/28/23 1551
4th			2/28/23 1551	

LABORATORY USE ONLY

Logged In By: _____ Total Samples: 2/28/23 (7) Laboratory #: _____

GLS MC 3/1/23 1235

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

April 11, 2023

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

Lab No. : **VI 2341855**
Customer No. : **4018573**
Reference : **40352**

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
N Dairy	03/28/2023	03/28/2023	VI 2341855-001	AGW
E4 Dom	03/28/2023	03/28/2023	VI 2341855-002	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	
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: 2023-04-12

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

April 11, 2023

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

Description : N Dairy
Project : 0222 Meadow Lake Dairy

Lab No. : VI 2341855-001
Customer No. : 4018573
Reference : 40352
Sampled On : March 28, 2023 at 10:30
Sampled By : Sean
Received On : March 28, 2023 at 15:49
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
Nitrate Nitrogen	ND	0.4	mg/L		1	U	03/29/2023	15:00	lfs	SM 4500-NO3 F	03/29/2023	16:50	lfs
Conductivity	188	1	umhos/cm		1		04/03/2023	15:15	amm	SM 4500-H+B	04/04/2023	00:50	amm

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

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

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

April 11, 2023

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

Description : E4 Dom
Project : 0222 Meadow Lake Dairy

Lab No. : VI 2341855-002
Customer No. : 4018573
Reference : 40352
Sampled On : March 28, 2023 at 10:45
Sampled By : Sean
Received On : March 28, 2023 at 15:49
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
Nitrate Nitrogen	34.8	0.4	mg/L		1		03/29/2023	15:00	lfs	SM 4500-NO3 F	03/29/2023	16:53	lfs
Conductivity	1140	1	umhos/cm		1		04/03/2023	15:15	amm	SM 4500-H+B	04/03/2023	22:22	amm

DQF Flags Definition:

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

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

April 11, 2023
Innovative Ag Services, LLC

Lab No. : VI 2341855
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2341806-001)	Dup	umhos/cm		0%	5	
		(SP 2304656-004)	Dup	umhos/cm		0.5%	5	
Nitrate Nitrogen	4500NO3F	03/29/2023:203320LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	93.7%	80-120	
			MS	mg/L	5.609	87.3%	66-125	
		(CH 2371986-001)	MSD	mg/L	5.609	89.8%	66-125	
			MSRPD	mg/L	5.609	1.3%	≤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.

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Laboratory Analysis Work Order

Nº 40352

ID: # 0222 2341855

LABORATORY: FGL

SITE NAME: MEADOW LAKE DAIRY

Authorized Copy Release to:

Billing: IAS

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 169

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	N DAIRY	DOM	W1	3/28/23 10:30	SEAN	¢		
2	E4 DOM	DOM	W1	3/28/23 10:45	SEAN	¢		
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 3/23/23
CDA 1345

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st		IAS		3/28/23 3:00
2nd		FGL	3/28/23 1500	
3rd		FGL		3/28/23 1549
4th			3/28/23 1549	

LABORATORY USE ONLY
Logged In By: _____ Total Samples: _____ Laboratory #: _____

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

August 3, 2023

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

Lab No. : **VI 2344526**
Customer No. : **4018573**
Reference : **41024**

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
E1	07/11/2023	07/11/2023	VI 2344526-001	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)

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: 2023-08-03

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

August 3, 2023

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

Description : E1
Project : 0222 Meadow Lake Dairy

Lab No. : VI 2344526-001
Customer No. : 4018573
Reference : 41024
Sampled On : July 11, 2023 at 11:30
Sampled By : Sean
Received On : July 11, 2023 at 15:35
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)	150	10	mg/L		1		07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	17:53	amm
Bicarbonate	180	10	mg/L		1		07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	17:53	amm
Carbonate	ND	10	mg/L		1	U	07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	17:53	amm
Hydroxide	ND	10	mg/L		1	U	07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	17:53	amm
Chloride	105	4*	mg/L		4	lb	07/12/2023	11:07	ldm	EPA 300.0	07/14/2023	01:29	krh
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	19:58	lcr
Nitrate Nitrogen	37.8	0.4*	mg/L		4		07/12/2023	11:07	ldm	EPA 300.0	07/14/2023	01:29	krh
Nitrogen, Total as Nitrogen	37.8	0.5	mg/L		1		07/28/2023	08:46	sta	Calc.	07/31/2023	19:58	lcr
Nitrate + Nitrite as N	37.8	0.4*	mg/L		4		07/12/2023	11:07	ldm	EPA 300.0	07/14/2023	01:29	krh
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	19:58	lcr
Conductivity	1030	1	umhos/cm		1		07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	17:53	amm
Sulfate Sulfur	18.0	0.17	mg/L		1	l	07/12/2023	11:07	ldm	EPA 300.0	07/13/2023	08:50	krh
Solids, Total Dissolved (TDS)	760	20	mg/L		1		07/13/2023	09:40	ctl	SM 2540 C	07/14/2023	11:00	ctl
Calcium	106	1	mg/L		1		07/14/2023	06:55	ejc	EPA 200.7	07/14/2023	18:02	ac
Magnesium	8	1	mg/L		1		07/14/2023	06:55	ejc	EPA 200.7	07/14/2023	18:02	ac
Sodium	71	1	mg/L		1		07/14/2023	06:55	ejc	EPA 200.7	07/14/2023	18:02	ac

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level * RL adusted for dilution, Dil.=Dilution

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

August 3, 2023
Innovative Ag Services, LLC

Lab No. : VI 2344526
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	07/14/2023:207699EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	103%	85-115	
			MS	mg/L	12.00	76.5%	75-125	
		(CC 2382234-001)	MSD	mg/L	12.00	79.5%	75-125	
			MSRPD	mg/L		0.6%	≤20.0	
			MS	mg/L	12.00	117%	75-125	
		(SP 2311901-001)	MSD	mg/L	12.00	97.4%	75-125	
			MSRPD	mg/L		8.0%	≤20.0	
Magnesium	200.7	07/14/2023:207699EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	106%	85-115	
			MS	mg/L	12.00	80.0%	75-125	
		(CC 2382234-001)	MSD	mg/L	12.00	83.5%	75-125	
			MSRPD	mg/L		0.9%	≤20	
			MS	mg/L	12.00	114%	75-125	
		(SP 2311901-001)	MSD	mg/L	12.00	101%	75-125	
			MSRPD	mg/L		7.3%	≤20	
Sodium	200.7	07/14/2023:207699EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	103%	85-115	
			MS	mg/L	12.00	37.4%	<¼	406
		(CC 2382234-001)	MSD	mg/L	12.00	56.8%	<1/4	
			MSRPD	mg/L		1.9%	≤20.0	
			MS	mg/L	12.00	253%	<¼	406
		(SP 2311901-001)	MSD	mg/L	12.00	87.8%	75-125	
			MSRPD	mg/L		7.9%	≤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.

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August 3, 2023
Innovative Ag Services, LLC

Lab No. : VI 2344526
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO3)	2320B	07/17/2023:207798AMM	ND	mg/L		1.39%	10	406
Bicarbonate	2320B	(VI 2344701-012)	Dup	mg/L		1.33%	10	
Carbonate	2320B	(VI 2344701-012)	Dup	mg/L			10	
E. C.	2320B	(VI 2344701-012)	Dup	umhos/cm		0%	5	
Solids, Total Dissolved	2540CE	07/13/2023:207664CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	993.7	102%	90-110	
		(VI 2344526-001)	Dup	mg/L		4.00%	5	
		(VI 2344526-001)	Dup	mg/L		3.93%	5	
Chloride	300.0	07/12/2023:207721LDM	Blank	mg/L		1	<1	
			LCS	mg/L	25.00	101 %	90-110	
			MS	mg/L	50.00	84.2 %	85-121	435
		(CC 2381926-002)	MSD	mg/L	50.00	83.9 %	85-121	435
			MSRPD	mg/L	10.00	0.2%	≤19	
			MS	mg/L	50.00	80.5 %	85-121	435
		(CC 2381926-001)	MSD	mg/L	50.00	73.7 %	85-121	435
			MSRPD	mg/L	10.00	3.5%	≤19	
Nitrate + Nitrite as N	300.0	07/12/2023:207721LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	99.8 %	90-110	
			MS	mg/L	40.00	104 %	85-119	
		(CC 2381926-002)	MSD	mg/L	40.00	96.9 %	85-119	
			MSRPD	mg/L	10.00	5.9%	≤19	
			MS	mg/L	40.00	100 %	85-119	
		(CC 2381926-001)	MSD	mg/L	40.00	97.6 %	85-119	
			MSRPD	mg/L	10.00	2.2%	≤19	
Nitrate Nitrogen	300.0	07/12/2023:207721LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	99.8 %	90-110	
			MS	mg/L	40.00	104 %	85-119	
		(CC 2381926-002)	MSD	mg/L	40.00	96.9 %	85-119	
			MSRPD	mg/L	10.00	5.9%	≤19	
			MS	mg/L	40.00	100 %	85-119	
		(CC 2381926-001)	MSD	mg/L	40.00	97.6 %	85-119	
			MSRPD	mg/L	10.00	2.2%	≤19	
Sulfate Sulfur	300.0	07/12/2023:207721LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	102 %	90-110	
			MS	mg/L	100.0	70.6 %	82-124	435
		(CC 2381926-002)	MSD	mg/L	100.0	53.6 %	82-124	435
			MSRPD	mg/L	10.00	5.0%	≤23	
			MS	mg/L	100.0	86.4 %	82-124	
		(CC 2381926-001)	MSD	mg/L	100.0	78.4 %	82-124	435
			MSRPD	mg/L	10.00	2.7%	≤23	
Nitrogen, Total Kjeldahl	351.2	07/28/2023:208341STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	94.9%	73-124	
			MS	mg/L	12.00	94.6%	54-136	
		(SP 2311944-003)	MSD	mg/L	12.00	94.6%	54-136	
			MSRPD	mg/L		0.0%	≤27	
			MS	mg/L	12.00	93.8%	54-136	
		(SP 2311944-004)	MSD	mg/L	12.00	92.6%	54-136	
			MSRPD	mg/L		1.2%	≤27	

Page 4 of 5

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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	
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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2344526

Laboratory Analysis Work Order

Nº 41024

ID: # 0222

SITE NAME: MEADOW LAKE DAIRY

R01 21.4°C

Billing: IAS

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: _____

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_4N *	pH	Temp
1	F1	IRR	W5	7/11/23 11:30	SEAN	Ø		
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:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st		IAS		7/11/23 3:00
2nd		FGL	7-11-23 15:20	
3rd		FGL		7-11-23 15:35
4th	SRO	FGL	7/11/23 1535	
	SRO	FGL	7/11/23 1730	
		GLS	7/11/23 1730	

LABORATORY USE ONLY

Logged In By: _____ Total Samples: _____ Laboratory #: _____ 7/12/23 1730

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

September 7, 2023

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

Lab No. : **VI 2345474**
Customer No. : **4018573**
Reference : **41217**

Laboratory Report

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

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(3 pages)	: Results for each sample submitted.
Quality Control	(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
West Barn Dairy 1	08/16/2023	08/16/2023	VI 2345474-001	DW
NE 16	08/16/2023	08/16/2023	VI 2345474-002	AGW
NE 15	08/16/2023	08/16/2023	VI 2345474-003	AGW

Sampling and Receipt Information:

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

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

Test Summary	
EPA 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: EHB

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-09-08

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

September 7, 2023

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

Description : West Barn Dairy 1
Project : 0222 Meadow Lake Dairy

Lab No. : VI 2345474-001
Customer No. : 4018573
Reference : 41217
Sampled On : August 16, 2023 at 10:31
Sampled By : Frank
Received On : August 16, 2023 at 16:05
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	ND	0.4	mg/L	10	1	U	08/17/2023	13:00	lfs	SM 4500-NO3 F	08/17/2023	15:47	lfs
Conductivity	201	1	umhos/cm	1600[2]	1		08/22/2023	15:45	amm	SM 4500-H+B	08/22/2023	17:16	amm

DQF Flags Definition:
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

September 7, 2023

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

Description : NE 16
Project : 0222 Meadow Lake Dairy

Lab No. : VI 2345474-002
Customer No. : 4018573
Reference : 41217
Sampled On : August 16, 2023 at 11:38
Sampled By : Frank
Received On : August 16, 2023 at 16:05
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	08/30/2023	08:34	sta	EPA 351.2	09/05/2023	19:57	lcr
Nitrate Nitrogen	2.5	0.4	mg/L		1		08/17/2023	13:00	lfs	SM 4500-NO3 F	08/17/2023	15:49	lfs
Nitrogen, Total as Nitrogen	2.5	0.5	mg/L		1	l	08/30/2023	08:34	sta	Calc.	09/05/2023	19:57	lcr
Nitrate + Nitrite as N	2.5	0.4	mg/L		1		08/17/2023	13:00	lfs	SM 4500-NO3 F	08/17/2023	15:49	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	08/30/2023	08:34	sta	EPA 351.2	09/05/2023	19:57	lcr
Conductivity	389	1	umhos/cm		1		08/22/2023	15:45	amm	SM 4500-H+B	08/22/2023	17:51	amm
Solids, Total Dissolved (TDS)	230	20	mg/L		1		08/18/2023	11:45	ctl	SM 2540 C	08/21/2023	12:00	ctl

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

September 7, 2023

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

Description : NE 15
Project : 0222 Meadow Lake Dairy

Lab No. : VI 2345474-003
Customer No. : 4018573
Reference : 41217
Sampled On : August 16, 2023 at 11:24
Sampled By : Frank
Received On : August 16, 2023 at 16:05
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Alkalinity (as CaCO3)	80	10	mg/L		1		08/19/2023	20:02	amm	SM 4500-H+B	08/20/2023	06:57	amm
Bicarbonate	70	10	mg/L		1		08/19/2023	20:02	amm	SM 4500-H+B	08/20/2023	06:57	amm
Carbonate	10	10	mg/L		1		08/19/2023	20:02	amm	SM 4500-H+B	08/20/2023	06:57	amm
Hydroxide	10	10	mg/L		1		08/19/2023	20:02	amm	SM 4500-H+B	08/20/2023	06:57	amm
Chloride	14	1	mg/L		1		08/17/2023	15:26	ldm	EPA 300.0	08/18/2023	10:13	ldm
Nitrogen, Total Kjeldahl	0.6	0.5	mg/L		1	l	08/30/2023	08:34	sta	EPA 351.2	09/05/2023	19:59	lcr
Nitrate Nitrogen	0.2	0.1	mg/L		1		08/17/2023	15:26	ldm	EPA 300.0	08/18/2023	10:13	ldm
Nitrogen, Total as Nitrogen	0.8	0.5	mg/L		1	l	08/30/2023	08:34	sta	Calc.	09/05/2023	19:59	lcr
Nitrate + Nitrite as N	0.2	0.1	mg/L		1		08/17/2023	15:26	ldm	EPA 300.0	08/18/2023	10:13	ldm
Kjeldahl Nitrogen	0.6	0.5	mg/L		1	l	08/30/2023	08:34	sta	EPA 351.2	09/05/2023	19:59	lcr
Conductivity	220	1	umhos/cm		1		08/19/2023	20:02	amm	SM 4500-H+B	08/20/2023	06:57	amm
Sulfate Sulfur	3.10	0.17	mg/L		1		08/17/2023	15:26	ldm	EPA 300.0	08/18/2023	10:13	ldm
Solids, Total Dissolved (TDS)	150	20	mg/L		1		08/18/2023	13:50	ctl	SM 2540 C	08/21/2023	12:00	ctl
Calcium	4	1	mg/L		1		08/18/2023	02:36	ejc	EPA 200.7	08/18/2023	21:15	ejc
Magnesium	ND	1	mg/L		1	Ulh	08/18/2023	02:36	ejc	EPA 200.7	08/18/2023	21:15	ejc
Sodium	46	1	mg/L		1		08/18/2023	02:36	ejc	EPA 200.7	08/18/2023	21:15	ejc

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

September 7, 2023
Innovative Ag Services, LLC

Lab No. : VI 2345474
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	08/18/2023:209234EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	95.2%	85-115	
			MS	mg/L	12.00	1.11%	<¼	406
		(STK2351270-001)	MSD	mg/L	12.00	49.0%	<1/4	
			MSRPD	mg/L		7.4%	≤20.0	
			MS	mg/L	12.00	58.2%	<¼	406
		(STK2351270-003)	MSD	mg/L	12.00	161%	<1/4	
			MSRPD	mg/L		14.5%	≤20.0	
Magnesium	200.7	08/18/2023:209234EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	96.1%	85-115	
			MS	mg/L	12.00	51.2%	75-125	435
		(STK2351270-001)	MSD	mg/L	12.00	77.5%	75-125	
			MSRPD	mg/L		6.6%	≤20	
			MS	mg/L	12.00	78.8%	75-125	
		(STK2351270-003)	MSD	mg/L	12.00	149%	75-125	435
			MSRPD	mg/L		16.2%	≤20	
Sodium	200.7	08/18/2023:209234EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	92.1%	85-115	
			MS	mg/L	12.00	-49.9%	<¼	406
		(STK2351270-001)	MSD	mg/L	12.00	13.7%	<1/4	
			MSRPD	mg/L		6.3%	≤20.0	
			MS	mg/L	12.00	30.2%	<¼	406
		(STK2351270-003)	MSD	mg/L	12.00	196%	<1/4	
			MSRPD	mg/L		15.0%	≤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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September 7, 2023
Innovative Ag Services, LLC

Lab No. : VI 2345474
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO3)	2320B	08/19/2023:209283AMM	ND	mg/L		0.1%	10	435
Bicarbonate	2320B	(CH 2376801-006)	Dup	mg/L		0.08%	10	
E. C.	2320B	(CH 2376801-006)	Dup	umhos/cm		0.08%	5	
	2320B	(SP 2314332-003)	Dup	umhos/cm		0%	5	
		(VI 2345472-003)	Dup	umhos/cm		0.4%	5	
Solids, Total Dissolved	2540CE	08/18/2023:209267CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	101%	90-110	
		(SP 2314111-001)	Dup	mg/L		0.04%	5	
		(SP 2314111-001)	Dup	mg/L		0.9%	5	
			Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	100%	90-110	
		(SP 2314111-002)	Dup	mg/L		0.1%	5	
		(SP 2314111-002)	Dup	mg/L		2.10%	5	
Chloride	300.0	08/17/2023:209328LDM	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	99.3 %	90-110	
			MS	mg/L	50.00	101 %	67-117	
		(CH 2376734-008)	MSD	mg/L	50.00	100 %	67-117	
			MSRPD	mg/L	10.00	0.5%	≤7	
			MS	mg/L	50.00	98.2 %	67-117	
		(CH 2376738-001)	MSD	mg/L	50.00	97.7 %	67-117	
			MSRPD	mg/L	10.00	0.4%	≤7	
Nitrate + Nitrite as N	300.0	08/17/2023:209328LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	99.8 %	90-110	
			MS	mg/L	40.00	102 %	86-112	
		(CH 2376734-008)	MSD	mg/L	40.00	102 %	86-112	
			MSRPD	mg/L	10.00	0.5%	≤7	
			MS	mg/L	40.00	103 %	86-112	
		(CH 2376738-001)	MSD	mg/L	40.00	102 %	86-112	
			MSRPD	mg/L	10.00	0.5%	≤7	
Nitrate Nitrogen	300.0	08/17/2023:209328LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	99.8 %	90-110	
			MS	mg/L	40.00	102 %	86-112	
		(CH 2376734-008)	MSD	mg/L	40.00	102 %	86-112	
			MSRPD	mg/L	10.00	0.5%	≤7	
			MS	mg/L	40.00	103 %	86-112	
		(CH 2376738-001)	MSD	mg/L	40.00	102 %	86-112	
			MSRPD	mg/L	10.00	0.5%	≤7	
Sulfate Sulfur	300.0	08/17/2023:209328LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	101 %	90-110	
			MS	mg/L	100.0	101 %	18-165	
		(CH 2376734-008)	MSD	mg/L	100.0	101 %	18-165	
			MSRPD	mg/L	10.00	0.5%	≤7	
			MS	mg/L	100.0	95.8 %	18-165	
		(CH 2376738-001)	MSD	mg/L	100.0	95.2 %	18-165	
			MSRPD	mg/L	10.00	0.4%	≤7	
Nitrogen, Total Kjeldahl	351.2	08/30/2023:209713STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	97.1%	73-124	
			MS	mg/L	12.00	88.0%	90-110	435
		(STK2351326-005)	MSD	mg/L	12.00	87.1%	90-110	435
			MSRPD	mg/L		1.0%	≤20	

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September 7, 2023
Innovative Ag Services, LLC

Lab No. : VI 2345474
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
			MS	mg/L	12.00	90.3%	90-110	
		(CH 2376855-001)	MSD	mg/L	12.00	90.1%	90-110	
			MSRPD	mg/L		0.3%	≤20	
Nitrate + Nitrite as N	4500NO3F	08/17/2023:209186LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	99.9%	80-120	
			MS	mg/L	5.609	99.7%	66-125	
		(CC 2382766-001)	MSD	mg/L	5.609	102%	66-125	
			MSRPD	mg/L		2.3%	≤30.4	
Nitrate Nitrogen	4500NO3F	08/17/2023:209186LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	99.9%	80-120	
			MS	mg/L	5.609	99.7%	66-125	
		(CC 2382766-001)	MSD	mg/L	5.609	102%	66-125	
			MSRPD	mg/L		2.3%	≤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.

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 41217

ID: # 0222 23454734

LABORATORY: ~~IWDH~~ FGL

SITE NAME: Meadow Lake Dairy

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	WestBarnDairy 1	Dom	W1	8/16 10:31	Frank	—		
2	NE 16	Irr	W2	11:38		—		
3	NE 15	Irr	W5	11:24		—		
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: 7.9°C ROI

ID# TH 407

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st	[signature]	IAS		2:00 8/16/23
2nd	[signature]	FGL	8-16-23 15:45	
3rd	[signature]	FGL		8-16-23 16:25
4th	[signature]	FGL	8-16-2023 1605	

LABORATORY USE ONLY

Logged In By: Rec GLS 8-16-2023 1730 Total Samples: _____ Laboratory #: _____

GLS MC 8/18/23 1230