



Tri J Dairy

2023 Annual Report

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

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

(See attached delivery confirmation)

Annual Report

Tri J Dairy 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Facility Information:

Name of Dairy Tri J Dairy
Facility Address 11951 Road 96, Tipton CA 93272

Owner/Operator as of 12/31/2023

Operator Name Ryan Junio
Operator Phone (559) 757-2619
Owner Name RBH Farms
Owner Phone (559) 799-6589

1. Beginning and end dates of the annual reporting period: crops harvested January 1, 2023 through December 31, 2023.
2. Maximum and average number and type of animals (see Attachment A).
3. Estimated amount of total manure and process wastewater generated by the facility (see Attachment A).
4. Estimated amount of total manure and process wastewater applied to each land application area (see Attachment B).
5. Quantified ratio of total nitrogen applied to land application areas and total nitrogen removed by crop harvest (see Attachment B).
6. Estimated amount of total manure and process wastewater transferred to other persons by the facility (see Attachment C).
7. Total number of acres and the Assessor Parcel Numbers for all land application areas that were not used for application of manure or process wastewater (see Attachment D).
8. Total number of acres and the Assessor Parcel Numbers for all land application areas that were used for land application of manure and process wastewater (see Attachment D).
9. Summary of manure and process wastewater discharges from the production area
Provide a summary of all manure and wastewater discharges from the production area to surface water or to land areas (land application areas or otherwise) when not in accordance with the facility's Nutrient Management Plan, that occurred during the annual reporting period, including the date, time, location, approximate volume, a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows:
☒ No discharges occurred during the reporting period.
☐ Yes. _____ Number of discharges occurred (see Attachment H).

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10. Summary of storm water discharges from the production area

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

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

11. Summary of discharges from the land application area

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

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

12. Nutrient Management Plan update

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

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

13. Manure/Process Wastewater Tracking Manifests

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

- ☒ No.
☐ Yes, see attached manifests.

14. Written Agreements

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

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

15. Laboratory Analyses for Discharges

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

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

16. Tabulated Nutrient Analytical Data

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

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17. Record-Keeping Results

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

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

18. Groundwater Monitoring Section

- ☒ Groundwater monitoring results are attached.
- ☐ Monitoring Well results are attached, if applicable.

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

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

19. Storm Water Reporting Section

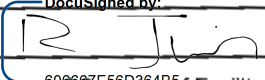
- ☒ No significant discharges of storm water occurred from the land application areas.
- ☐ Yes, significant discharge(s) of storm water occurred from land application areas. The following information shall be submitted for those discharges.
- ☐ It was not possible to collect any of the required samples or perform visual observations due to adverse climatic conditions.

20. Mortality Management Practices

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

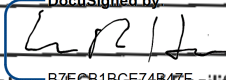
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"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information,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

DocuSigned by:

608697556D364B5
Signature of Operator of Facility

Ryan Junio
Print Name

6/28/2024
Title and Date

DocuSigned by:

87EECB1BC574B475
Signature of Owner of Facility

RBH Farms
Print Name

6/28/2024
Title and Date

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Estimated Manure and Nutrients Generated (Attachment A)

Animal Type	Maximum No. of Head	Average No. of Head*	Housing Type	Weight	Total Manure Produced (tons/year)	NITROGEN	PHOSPHORUS	POTASSIUM	SALTS
						Net (LB) Available for Land Application	Net (LB) Available for Land Application	Net (LB) Available for Land Application	Net (LB) Available for Land Application
Hol Heifers (15-24)	975	950	Flushed	1,000	9,916.60	131,765.00	20,805.00	62,415.00	244,666.80
Hol Heifers (7-14)	500	487	Flushed	750	4,683.61	46,216.30	7,821.22	26,663.25	58,792.47
Hol Calves (4-6)	325	316	Flushed	300	1,095.73	16,147.60	4,613.60	9,227.20	7,566.30
	1,800	1,753			15,695.94	194,128.90	33,239.82	98,305.45	311,025.57

* 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)**
4,806,311	346.00	97.98	881.50	4,280.00	13,852.65	3,922.58	35,292.24	171,356.53

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

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

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

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Nutrient Applications (Attachment B)

Field Name: BH1

Wheat, 31 Acres Planted on 11/16/2022

Date	Event/Source	Amount Applied/Yield (per Acre) Units		Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
10/10/2022	Corral Solids: Main Corral	10.00	Tons	40.60	1.11	0.53	2.60	%	310		4,088	1,955	9,575	0	
10/20/2022	Ground Water: Well Avg	5.00	Acre Inches		7.80			mg/L			273	0	0	6,311	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			434				
02/18/2023	Ground Water: Well Avg	5.00	Acre Inches		10.20			mg/L			358	0	0	8,064	
04/26/2023	Ground Water: Well Avg	5.00	Acre Inches		10.20			mg/L			358	0	0	8,064	
05/26/2023	Harvest	19.00	Tons	69.70	1.59	0.41	2.29	%							5,675
Acre Inches Applied:		15.00		Totals:					310		5,511	1,955	9,575	22,438	5,675
Season Nitrogen Ratio: 0.97				Lbs Per Acre:							178	63	309	724	183



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Nutrient Applications (Attachment B)

Field Name: BH1

Corn, 31 Acres Planted on 06/17/2023

Date	Event/Source	Amount Applied/Yield (per Acre) Units		Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
				% Moist.	Nitrogen	Phos.	Potass.							
06/28/2023	Ground Water: Well Avg	4.50	Acre Inches		10.20					322	0	0	7,257	
07/12/2023	Ground Water: Well Avg	4.60	Acre Inches		10.20					329	0	0	7,419	
07/12/2023	Waste Water: Main Lagoon	0.50	Acre Inches		313.00	100.00	731.00		420,892	1,097	351	2,563	17,145	
07/22/2023	Ground Water: Well Avg	4.50	Acre Inches		10.20					322	0	0	7,257	
08/08/2023	Ground Water: Well Avg	4.80	Acre Inches		10.20					343	0	0	7,741	
08/08/2023	Waste Water: Main Lagoon	0.50	Acre Inches		313.00	100.00	731.00		420,892	1,097	351	2,563	17,145	
08/21/2023	Ground Water: Well Avg	4.70	Acre Inches		10.20					336	0	0	7,580	
09/13/2023	Ground Water: Well Avg	4.50	Acre Inches		10.20					322	0	0	7,257	
10/18/2023	Harvest	31.33	Tons	62.80	1.09	0.20	0.97	%						7,876
Acre Inches Applied:		28.60		Totals:					841,783	4,168	701	5,126	78,801	7,876
Season Nitrogen Ratio: 0.53				Lbs Per Acre:						134	23	165	2,542	254

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Nutrient Applications (Attachment B)

Field Name: BH2

Corn, 100 Acres Planted on 05/04/2023

Date	Event/Source	Amount Applied/Yield (per Acre) Units		Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,400				
04/01/2023	Corral Solids: Main Corral	15.00	Tons	36.90	0.76	0.42	0.80	%	1,500		14,368	7,913	15,163	0	
04/23/2023	Ground Water: Well Avg	6.00	Acre Inches		10.20			mg/L			1,384	0	0	31,215	
05/21/2023	Ground Water: Well Avg	5.00	Acre Inches		10.20			mg/L			1,154	0	0	26,012	
06/28/2023	Ground Water: Well Avg	5.30	Acre Inches		10.20			mg/L			1,223	0	0	27,573	
06/28/2023	Waste Water: Main Lagoon	0.50	Acre Inches		446.00	134.00	1,110.0	mg/L		1,357,715	5,044	1,516	12,554	49,537	
07/13/2023	Ground Water: Well Avg	5.20	Acre Inches		10.20			mg/L			1,200	0	0	27,053	
07/24/2023	Ground Water: Well Avg	5.00	Acre Inches		10.20			mg/L			1,154	0	0	26,012	
07/24/2023	Waste Water: Main Lagoon	0.50	Acre Inches		313.00	100.00	731.00	mg/L		1,357,715	3,540	1,131	8,267	55,305	
08/10/2023	Ground Water: Well Avg	4.80	Acre Inches		10.20			mg/L			1,107	0	0	24,972	
08/22/2023	Harvest	30.80	Tons	62.70	0.98	0.16	0.50	%							22,586
Acre Inches Applied:		32.30		Totals:					1,500	2,715,430	31,574	10,560	35,984	267,679	22,586
Season Nitrogen Ratio: 1.40				Lbs Per Acre:							316	106	360	2,677	226



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Nutrient Applications (Attachment B)

Field Name: BH3

Wheat, 46 Acres Planted on 11/10/2022

Date	Event/Source	Amount Applied/Yield		Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
		(per Acre)	Units	% Moist.	Nitrogen	Phos.	Potass.	Units							
10/11/2022	Corral Solids: Main Corral	10.00	Tons	40.60	1.11	0.53	2.60	%	460		6,066	2,902	14,208	0	
10/24/2022	Ground Water: Well Avg	5.00	Acre Inches		7.80			mg/L			406	0	0	9,365	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			644				
02/22/2023	Ground Water: Well Avg	5.00	Acre Inches		10.20			mg/L			531	0	0	11,966	
04/23/2023	Ground Water: Well Avg	5.00	Acre Inches		10.20			mg/L			531	0	0	11,966	
05/26/2023	Harvest	19.20	Tons	69.90	1.63	0.44	2.27	%							8,666
Acre Inches Applied:		15.00		Totals:					460		8,177	2,902	14,208	33,296	8,666
Season Nitrogen Ratio: 0.94				Lbs Per Acre:							178	63	309	724	188



INNOVATIVE AG SERVICES

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Nutrient Applications (Attachment B)

Field Name: BH3

Corn, 46 Acres Planted on 06/18/2023

Date	Event/Source	Amount Applied/Yield		Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
		(per Acre)	Units	% Moist.	Nitrogen	Phos.	Potass.							
06/28/2023	Ground Water: Well Avg	4.50	Acre Inches		10.20					477	0	0	10,769	
07/12/2023	Ground Water: Well Avg	4.50	Acre Inches		10.20					477	0	0	10,769	
07/12/2023	Waste Water: Main Lagoon	0.60	Acre Inches		313.00	100.00	731.00		749,459	1,954	624	4,564	30,528	
07/24/2023	Ground Water: Well Avg	5.00	Acre Inches		10.20					531	0	0	11,966	
08/08/2023	Ground Water: Well Avg	4.80	Acre Inches		10.20					509	0	0	11,487	
08/08/2023	Waste Water: Main Lagoon	0.40	Acre Inches		313.00	100.00	731.00		499,639	1,303	416	3,042	20,352	
08/22/2023	Ground Water: Well Avg	4.75	Acre Inches		10.20					504	0	0	11,368	
09/13/2023	Ground Water: Well Avg	4.50	Acre Inches		10.20					477	0	0	10,769	
10/18/2023	Harvest	30.00	Tons	62.20	1.10	0.21	0.97	%						11,476
Acre Inches Applied:		29.05		Totals:					1,249,098	6,233	1,041	7,606	118,008	11,476
Season Nitrogen Ratio: 0.54				Lbs Per Acre:						136	23	165	2,565	249

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Nutrient Applications (Attachment B)

Field Name: BH4

Wheat, 61 Acres Planted on 11/17/2022

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
			% Moist.	Nitrogen	Phos.	Potass.	Units							
10/13/2022	Corral Solids: Main Corral	10.00 Tons	40.60	1.11	0.53	2.60	%	610		8,044	3,848	18,842	0	
10/29/2022	Ground Water: Well Avg	5.00 Acre Inches		7.80			mg/L			538	0	0	12,418	
01/01/2023	Atmospheric Deposit	14.00 Pounds		100.00			%			854				
02/28/2023	Ground Water: Well Avg	5.00 Acre Inches		10.20			mg/L			704	0	0	15,867	
04/20/2023	Ground Water: Well Avg	5.00 Acre Inches		10.20			mg/L			704	0	0	15,867	
05/26/2023	Harvest	18.50 Tons	67.70	1.62	0.39	1.77	%							11,810
Acre Inches Applied:		15.00	Totals:					610		10,844	3,848	18,842	44,153	11,810
Season Nitrogen Ratio: 0.92			Lbs Per Acre:							178	63	309	724	194



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Tri J Dairy 2023 Nutrient Applications (Attachment B)

Summary of Nutrient Applications, Removal, and Balance

	<u>Total N (Lbs)</u>	<u>Total P (Lbs)</u>	<u>Total K (Lbs)</u>	<u>Total Salts (Lbs)</u>	<u>Total Manure Applied</u>
Solid Manure	32,566.06	16,618.04	57,788.44	0.00	2,880.00 tons
Process Wastewater	14,035.60	4,388.74	33,552.64	190,011.70	4,806,311.10 gallons
Irrigation Water	16,574.32				
Fertilizer / Total Imports	0.00				
Atmospheric Deposition	3,332.00				
Total Nitrogen Applied	66,507.98				
Crop Nitrogen Removal	68,090.03				
Nitrogen Balance	(1,582.05)				
Nitrogen Ratio	0.98				

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

A. ESTIMATED TOTAL MANURE TRANSFERRED OFFSITE

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

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

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

B. ESTIMATED TOTAL PROCESS WASTEWATER TRANSFERRED OFFSITE

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

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

** Total (Nitrogen, Phosphorus, Potassium, TDS) (lbs) = Sum of (Nitrogen, Phosphorus, Potassium, TDS) for each wastewater export event based on (Process Wastewater(gals) x 8.33lb/gal) x (N03-N or TKN, P, K, TDS) x 10⁻⁶ using the samples closest in date to the export event.



INNOVATIVE AG SERVICES

Tri J Dairy 2023

Land Application Area Description Technical Report (Attachment D)

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
BH1	x293 x170 x003 xxxx	31	Both
BH2	x293 x170 x003 xxxx	100	Both
BH3	x293 x170 x003 xxxx, x293 x170 x004 xxxx	46	Both
BH4	x293 x170 x004 xxxx	61	Manure
		238	

Production Area APN(s): x293 x170 x004 xxxx

Tri J Dairy 2023

Lab Results Summary (Attachment E)

Process Wastewater

(mg/l/ppm unless noted otherwise)

Sample Date:	TKN	TP	TK	EC (umhos/cm)	NH4N	NO3N	TDS	pH (units)	General Minerals						
									CA	MG	NA	HCO3	CO3	SO4	CL
03/09/2023	392.00	90.90	976.00	6,190	139.00		4,110.00								
06/16/2023	446.00	134.00	1,110.00	6,590	164.00	0.00	4,380.00	7.21							
07/10/2023	313.00	100.00	731.00	7,370	134.00		4,890.00								
11/01/2023	233.00	67.00	709.00	5,640	175.00		3,740.00								
Averages:	346.00	97.98	881.50	6,448	153.00	0.00	4,280.00	7.21							

Manure - Corral Solids

(Dry Weight Basis)

Sample Date:	TN	TP	TK	Moisture	Ash	CA	MG	NA	S	CL
06/14/2023	0.76	0.42	0.80	36.90						%
11/01/2023	1.34	0.56	1.91	55.40						%
Averages:	1.05	0.49	1.36	46.15						

Plant Tissue

(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
BH1	1	Wheat	05/26/2023	31.80	8.12	45.80	69.70	9.95
BH1	2	Corn	10/18/2023	21.80	4.06	19.42	62.80	4.95

Tri J 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 (%)
BH2	1	Corn	08/22/2023	19.66	3.22	10.00	62.70	4.88
BH3	1	Wheat	05/26/2023	32.60	8.72	45.40	69.90	9.97
BH3	2	Corn	10/18/2023	22.00	4.14	19.40	62.20	4.86
BH4	1	Wheat	05/26/2023	32.40	7.80	35.40	67.70	9.22

Well / Irrigation Water

(mg/l/ppm unless noted otherwise)

Well Irrigation Water

(mg/l/ppm unless noted otherwise)

	Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	General Minerals						
								CA	MG	NA	HCO3	CO3	SO4	CL
Dairy														
Barn Well	03/28/2023	27.40		636		450.00		67.00	5.00	52.00	170.00	0.00	7.70	30.00
Averages:		27.40		636		450.00		67.00	5.00	52.00	170.00	0.00	7.70	30.00
Irrigation														
Irr Well #3	04/25/2023	8.30		265		160.00	8.40	6.00	0.00	50.00	60.00	0.00	4.60	17.00
Irr Well #4	07/11/2023	12.10		484		300.00	12.10	42.00	3.00	46.00	140.00	0.00	8.40	40.00
Averages:		10.20		374		230.00	10.25	24.00	1.50	48.00	100.00	0.00	6.50	28.50

* NH4N was non-detectable unless a value is shown

Tri J Dairy 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: BH1								
	1	Wheat	31	11/16/2022	05/26/2023	18.2	589.0	19.0
	2	Corn	31	06/17/2023	10/18/2023	32.9	971.2	31.3
Field: BH2								
	1	Corn	100	05/04/2023	08/22/2023	31.0	3080.0	30.8
Field: BH3								
	1	Wheat	46	11/10/2022	05/26/2023	18.6	883.2	19.2
	2	Corn	46	06/18/2023	10/18/2023	29.5	1380.0	30.0
Field: BH4								
	1	Wheat	61	11/17/2022	05/26/2023	19.9	1128.5	18.5

Tri J 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



ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

April 26, 2023

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

Lab No. : VI 2341854**Customer No.** : 4018573**Reference** : 40353**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
Barn Well	03/28/2023	03/28/2023	VI 2341854-001	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)
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)

Discussion of Analytical Results:

The nitrate result was over the calibration range.

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: 2023-04-26

Section: Case Narrative

Page 1 of 4

Page 1 of 4

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ENVIRONMENTAL AGRICULTURAL

Analytical Chemists

April 26, 2023

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

Description : Barn Well
Project : 0314 Tri J Dairy

Lab No. : VI 2341854-001
Customer No. : 4018573
Reference : 40353
Sampled On : March 28, 2023 at 11:15
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
Alkalinity (as CaCO ₃)	140	10	mg/L		1		04/05/2023	17:38	amm	SM 4500-H+B	04/05/2023	23:52	amm
Bicarbonate	170	10	mg/L		1		04/05/2023	17:38	amm	SM 4500-H+B	04/05/2023	23:52	amm
Carbonate	ND	10	mg/L		1	U	04/05/2023	17:38	amm	SM 4500-H+B	04/05/2023	23:52	amm
Hydroxide	ND	10	mg/L		1	U	04/05/2023	17:38	amm	SM 4500-H+B	04/05/2023	23:52	amm
Chloride	30	1	mg/L		1	l	03/29/2023	16:07	ldm	EPA 300.0	03/30/2023	06:49	krh
Nitrate Nitrogen	27.4	0.1	mg/L		1		03/29/2023	16:07	ldm	EPA 300.0	03/30/2023	06:49	krh
Conductivity	636	1	umhos/cm		1		04/05/2023	17:38	amm	SM 4500-H+B	04/05/2023	23:52	amm
Sulfate Sulfur	7.70	0.17	mg/L		1		03/29/2023	16:07	ldm	EPA 300.0	03/30/2023	06:49	krh
Solids, Total Dissolved (TDS)	450	20	mg/L		1		03/30/2023	10:25	ctl	SM 2540 C	03/31/2023	12:00	ctl
Calcium	67	1	mg/L		1	h	04/03/2023	02:12	ejc	EPA 200.7	04/03/2023	14:01	ac
Magnesium	5	1	mg/L		1	h	04/03/2023	02:12	ejc	EPA 200.7	04/03/2023	14:01	ac
Potassium	1	1	mg/L		1	h	04/03/2023	02:12	ejc	EPA 200.7	04/03/2023	14:01	ac
Sodium	52	1	mg/L		1	h	04/03/2023	02:12	ejc	EPA 200.7	04/03/2023	14:01	ac

DQF Flags Definition:

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

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



ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

April 26, 2023
Innovative Ag Services, LLC

Lab No. : VI 2341854
Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals Calcium	200.7	04/03/2023:203482EJC (VI 2341854-001) (STK2333843-005)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	97.6 %	85-115	
			MS	mg/L	12.00	265 %	<¼	
			MSD	mg/L	12.00	343 %	<¼	
			MSRPD	mg/L	0.8000	9.0%	≤20.0	
			MS	mg/L	12.00	158 %	75-125	435
			MSD	mg/L	12.00	145 %	75-125	435
Magnesium	200.7	04/03/2023:203482EJC (VI 2341854-001) (STK2333843-005)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	98.3 %	85-115	
			MS	mg/L	12.00	141 %	75-125	435
			MSD	mg/L	12.00	155 %	75-125	435
			MSRPD	mg/L	0.8000	7.6%	≤20	
			MS	mg/L	12.00	156 %	75-125	435
			MSD	mg/L	12.00	145 %	75-125	435
Potassium	200.7	04/03/2023:203482EJC (VI 2341854-001) (STK2333843-005)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	96.6 %	85-115	
			MS	mg/L	12.00	133 %	75-125	435
			MSD	mg/L	12.00	145 %	75-125	435
			MSRPD	mg/L	0.8000	8.2%	≤20.0	
			MS	mg/L	12.00	152 %	75-125	435
			MSD	mg/L	12.00	142 %	75-125	435
Sodium	200.7	04/03/2023:203482EJC (VI 2341854-001) (STK2333843-005)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	98.2 %	85-115	
			MS	mg/L	12.00	240 %	<¼	
			MSD	mg/L	12.00	308 %	<¼	
			MSRPD	mg/L	0.8000	9.6%	≤20.0	
			MS	mg/L	12.00	153 %	75-125	435
			MSD	mg/L	12.00	142 %	75-125	435
			MSRPD	mg/L	0.8000	7.7%	≤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 analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
- MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
- ND : Non-detect - Result was below the DQO listed for the analyte.

Explanation

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

April 26, 2023

Innovative Ag Services, LLC

Lab No. : VI 2341854

Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO ₃)	2320B	04/05/2023:203616AMM	ND	mg/L		0.4%	10	435
Bicarbonate	2320B	(VI 2341857-003)	Dup	mg/L		0%	10	
E. C.	2320B	(VI 2341857-003)	Dup	umhos/cm		0%	5	
Solids, Total Dissolved	2540CE	03/30/2023:203363CTL (SP 2304556-001) (SP 2304556-001)	Blank	mg/L		ND	<20	
			LCS	mg/L	991.1	102%	90-110	
			Dup	mg/L		2.50%	5	
			Dup	mg/L		2.05%	5	
Chloride	300.0	03/29/2023:203510LDM (VI 2341789-002)	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	101 %	90-110	
			MS	mg/L	50.00	90.6 %	85-121	
			MSD	mg/L	50.00	88.1 %	85-121	
			MSRPD	mg/L	100.0	1.4%	≤19	
			MS	mg/L	50.00	84.7 %	85-121	
			MSD	mg/L	50.00	83.5 %	85-121	435
			MSRPD	mg/L	100.0	0.6%	≤19	
Nitrate Nitrogen	300.0	03/29/2023:203510LDM (VI 2341789-002)	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	98.5 %	90-110	
			MS	mg/L	40.00	103 %	85-119	
			MSD	mg/L	40.00	99.9 %	85-119	
			MSRPD	mg/L	100.0	2.7%	≤19	
			MS	mg/L	40.00	101 %	85-119	
			MSD	mg/L	40.00	99.0 %	85-119	
			MSRPD	mg/L	100.0	1.8%	≤19	
Sulfate Sulfur	300.0	03/29/2023:203510LDM (VI 2341789-002)	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	99.1 %	90-110	
			MS	mg/L	100.0	96.2 %	82-124	
			MSD	mg/L	100.0	93.6 %	82-124	
			MSRPD	mg/L	100.0	1.8%	≤23	
			MS	mg/L	100.0	94.6 %	82-124	
			MSD	mg/L	100.0	93.2 %	82-124	
			MSRPD	mg/L	100.0	1.0%	≤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 analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.

Explanation

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



Laboratory Analysis Work Order

N° 40353

ID: # 0314

2341854

LABORATORY: FAL

SITE NAME: TR1 J DAIRY

Billing: JAS

Authorized Copy Release to:

Innovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO₃N (Dom)

W2 EC, NO₃N, TDS, TN (Irr)

W3 NH₄-N (Ammonium)

W4 EC, NO₃N, Ca, Mg, Na, K, HCO₃, CO₃, SO₄S, Cl, TDS (Dom, GM)

W5 EC, NO₃N, TDS, TN, Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl (Irr, GM)

W6 NO₃N, NO₂ (Dam ILRP, Annually)

W7 Ca, Mg, Na, K, HCO₃, CO₃, SO₄, Cl + Lab Filtering (GWM)

W8 Other: _____

Process Waste Water (lagoon)

L1 EC, NH₄N, TKN, TP, TK, TDS (Quarterly)

L2 EC, NO₃N, NH₄N, TKN, TP, TK, TDS, pH (Annually)

L3 L1 + Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl (Biennially)

L4 Other: _____

Manure

M1 TN, TP, TK, %M (2/year)

M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)

M3 Other: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO₃N, PO₄P, K-AA, Zn, Mn, Fe, Cu, SO₄S

S2 S1 + CEC, CaCO₃, OM, C:N, TN

S3 NO₃N, NH₄N

S4 Other: _____

Plant Tissue

P1 TN, NO₃N, PO₄P, K (Mid Season - Wheat)

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

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

P4 TN, %M

P5 % Moisture

P6 NIR

P7 Other: _____

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH ₄ N*	pH	Temp
1	BARN WELL	W4	3/28/23 11:15	SEAN	✓		
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 samples, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

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

LABORATORY USE ONLY

Logged In By: EW

Total Samples: 2341854

Laboratory #: _____



ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

May 15, 2023

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

Lab No. : VI 2342499**Customer No.** : 4018573**Reference** : 40437**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
Irr Well #3	04/25/2023	04/25/2023	VI 2342499-001	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: JRD

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


Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-05-17


ENVIRONMENTAL AGRICULTURAL
 Analytical Chemists

May 15, 2023

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

Description : Irr Well #3
 Project : 0314 Tri J Dairy

Lab No. : VI 2342499-001
 Customer No.: 4018573
 Reference : 40437
 Sampled On : April 25, 2023 at 10:30
 Sampled By : Sean
 Received On : April 25, 2023 at 15:56
 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)	60	10	mg/L		1		05/02/2023	13:20	amm	SM 4500-H+B	05/02/2023	21:14	amm
Bicarbonate	60	10	mg/L		1		05/02/2023	13:20	amm	SM 4500-H+B	05/02/2023	21:14	amm
Carbonate	ND	10	mg/L		1	J	05/02/2023	13:20	amm	SM 4500-H+B	05/02/2023	21:14	amm
Hydroxide	ND	10	mg/L		1	J	05/02/2023	13:20	amm	SM 4500-H+B	05/02/2023	21:14	amm
Chloride	17	1	mg/L		1	b	04/26/2023	15:32	ldm	EPA 300.0	04/27/2023	10:21	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	05/10/2023	13:10	sta	EPA 351.2	05/11/2023	11:23	lcr
Nitrate Nitrogen	8.3	0.1	mg/L		1		04/26/2023	15:32	ldm	EPA 300.0	04/27/2023	10:21	ldm
Nitrogen, Total as Nitrogen	8.4	0.5	mg/L		1		05/10/2023	13:10	sta	Calc.	05/11/2023	11:23	lcr
Nitrate + Nitrite as N	8.4	0.1	mg/L		1		04/26/2023	15:32	ldm	EPA 300.0	04/27/2023	10:21	ldm
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	05/10/2023	13:10	sta	EPA 351.2	05/11/2023	11:23	lcr
Conductivity	265	1	umhos/cm		1		05/02/2023	13:20	amm	SM 4500-H+B	05/02/2023	21:14	amm
Sulfate Sulfur	4.60	0.17	mg/L		1		04/26/2023	15:32	ldm	EPA 300.0	04/27/2023	10:21	ldm
Solids, Total Dissolved (TDS)	160	20	mg/L		1		04/27/2023	16:45	ctl	SM 2540 C	04/28/2023	11:30	ctl
Calcium	6	1	mg/L		1		04/28/2023	04:05	ejc	EPA 200.7	05/03/2023	11:31	ac
Magnesium	ND	1	mg/L		1	Jl	04/28/2023	04:05	ejc	EPA 200.7	05/03/2023	11:31	ac
Sodium	50	1	mg/L		1		04/28/2023	04:05	ejc	EPA 200.7	05/03/2023	11:31	ac

DQF Flags Definition:

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

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


ENVIRONMENTAL AGRICULTURAL
 Analytical Chemists

May 15, 2023

Innovative Ag Services, LLC

Lab No. : VI 2342499

Customer No. : 4018573

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals Calcium	200.7	04/28/2023:204568EJC (SP 2306409-002) (SP 2306442-002)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	96.0 %	85-115	
			MS	mg/L	12.00	101 %	75-125	
			MSD	mg/L	12.00	79.2 %	75-125	
			MSRPD	mg/L	4.000	3.7%	≤20.0	
			MS	mg/L	12.00	-20.2 %	<¼	
			MSD	mg/L	12.00	173 %	<¼	
			MSRPD	mg/L	4.000	16.0%	≤20.0	
Magnesium	200.7	04/28/2023:204568EJC (SP 2306409-002) (SP 2306442-002)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	94.4 %	85-115	
			MS	mg/L	12.00	96.0 %	75-125	
			MSD	mg/L	12.00	86.2 %	75-125	
			MSRPD	mg/L	4.000	3.7%	≤20	
			MS	mg/L	12.00	61.9 %	75-125	
			MSD	mg/L	12.00	106 %	75-125	
			MSRPD	mg/L	4.000	13.1%	≤20	435
Sodium	200.7	04/28/2023:204568EJC (SP 2306409-002) (SP 2306442-002)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	96.9 %	85-115	
			MS	mg/L	12.00	97.4 %	75-125	
			MSD	mg/L	12.00	75.0 %	75-125	
			MSRPD	mg/L	4.000	3.1%	≤20.0	
			MS	mg/L	12.00	-22.8 %	<¼	
			MSD	mg/L	12.00	161 %	<¼	
			MSRPD	mg/L	4.000	14.2%	≤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 analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

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

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

Explanation

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

May 15, 2023

Innovative Ag Services, LLC

Lab No. : VI 2342499

Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO ₃)	2320B	05/02/2023:204734AMM	ND	mg/L		0.1%	10	435
Bicarbonate	2320B	(VI 2342453-003)	Dup	mg/L		0.2%	10	
E. C.	2320B	(VI 2342453-003)	Dup	umhos/cm		0.4%	5	
Solids, Total Dissolved	2540CE	04/27/2023:204553CTL (STK2335107-001) (STK2335107-001)	Blank	mg/L		ND	<20	
			LCS	mg/L	993.7	103%	90-110	
			Dup	mg/L		1.07%	5	
			Dup	mg/L		0.3%	5	
Chloride	300.0	04/26/2023:204584LDM (VI 2342426-002) (VI 2342426-003)	Blank	mg/L		1	<1	
			LCS	mg/L	25.00	101 %	90-110	
			MS	mg/L	50.00	94.0 %	85-121	
			MSD	mg/L	50.00	98.1 %	85-121	
			MSRPD	mg/L	100.0	3.0%	≤19	
			MS	mg/L	50.00	103 %	85-121	
			MSD	mg/L	50.00	98.5 %	85-121	
			MSRPD	mg/L	100.0	4.0%	≤19	
Nitrate + Nitrite as N	300.0	04/26/2023:204584LDM (VI 2342426-002) (VI 2342426-003)	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	101 %	90-110	
			MS	mg/L	40.00	99.6 %	85-119	
			MSD	mg/L	40.00	104 %	85-119	
			MSRPD	mg/L	100.0	4.1%	≤19	
			MS	mg/L	40.00	103 %	85-119	
			MSD	mg/L	40.00	98.9 %	85-119	
			MSRPD	mg/L	100.0	4.2%	≤19	
Nitrate Nitrogen	300.0	04/26/2023:204584LDM (VI 2342426-002) (VI 2342426-003)	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	101 %	90-110	
			MS	mg/L	40.00	99.6 %	85-119	
			MSD	mg/L	40.00	104 %	85-119	
			MSRPD	mg/L	100.0	4.1%	≤19	
			MS	mg/L	40.00	103 %	85-119	
			MSD	mg/L	40.00	98.9 %	85-119	
			MSRPD	mg/L	100.0	4.2%	≤19	
Sulfate Sulfur	300.0	04/26/2023:204584LDM (VI 2342426-002) (VI 2342426-003)	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	102 %	90-110	
			MS	mg/L	100.0	97.6 %	82-124	
			MSD	mg/L	100.0	102 %	82-124	
			MSRPD	mg/L	100.0	3.6%	≤23	
			MS	mg/L	100.0	103 %	82-124	
			MSD	mg/L	100.0	98.6 %	82-124	
			MSRPD	mg/L	100.0	3.7%	≤23	
Nitrogen, Total Kjeldahl	351.2	05/10/2023:205052STA (CH 2372746-001) (CH 2372746-002)	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	91.9%	73-124	
			MS	mg/L	12.00	86.2%	54-136	
			MSD	mg/L	12.00	87.8%	54-136	
			MSRPD	mg/L	12.00	1.8%	≤27	
			MS	mg/L	12.00	87.9%	54-136	
			MSD	mg/L	12.00	84.7%	54-136	
			MSRPD	mg/L	12.00	3.6%	≤27	

Definition

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

Explanation

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

N° 40437

ID: # 0314

2342499

LABORATORY: FGL

SITE NAME: TRI J DAIRY

Authorized Copy Release to:

Billing:

JAS

Innovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO₃N (Dom)

W2 EC, NO₃N, TDS, TN (Irr)

W3 NH₄-N (Ammonium)

W4 EC, NO₃N, Ca, Mg, Na, K, HCO₃, CO₃, SO₄S, Cl, TDS (Dom, GM)

W5 EC, NO₃N, TDS, TN, Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl (Irr, GM)

W6 NO₃N, NO₂ (Dom ILRP, Annually)

W7 Ca, Mg, Na, K, HCO₃, CO₃, SO₄, Cl + Lab Filtering (GWM)

W8 Other:

Process Waste Water (lagoon)

L1 EC, NH₄N, TKN, TP, TK, TDS (Quarterly)

L2 EC, NO₃N, NH₄N, TKN, TP, TK, TDS, pH (Annually)

L3 L1 + Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl (Biennially)

L4 Other:

Manure

M1 TN, TP, TK, %M (2/year)

M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)

M3 Other:

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO₃N,

PO₄P, K-AA, Zn, Mn, Fe, Cu, SO₄S

S2 S1 + CEC, CaCO₃, OM, C:N, TN

S3 NO₃N, NH₄N

S4 Other:

Plant Tissue

P1 TN, NO₃N, PO₄P, K (Mid Season - Wheat)

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

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

P4 TN, %M

P5 % Moisture

P6 NIR

P7 Other:

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH ₃ N*	pH	Temp
1	IRL WELL #3	W5	4/25/23 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 samples, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 st		JAS		4/25/23 2:30
2 nd		FGL	4-25-23 15:45	
3 rd		FGL		4-25-23 15:56
4 th			4/25/23 15:56	

LABORATORY USE ONLY

Logged In By:

Total Samples:

40503

Laboratory #:

GCS MLC

4/26/23 11:20



ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

August 3, 2023

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

Lab No. : VI 2344527**Customer No. : 4018573****Reference : 41025****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
Irr Well #4	07/11/2023	07/11/2023	VI 2344527-001	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


ENVIRONMENTAL AGRICULTURAL
 Analytical Chemists

August 3, 2023

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

Description : Irr Well #4
 Project : 0314 Tri J Dairy

Lab No. : VI 2344527-001
 Customer No.: 4018573
 Reference : 41025
 Sampled On : July 11, 2023 at 12:00
 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)	110	10	mg/L		1		07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	23:47	amm
Bicarbonate	140	10	mg/L		1		07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	23:47	amm
Carbonate	ND	10	mg/L		1	U	07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	23:47	amm
Hydroxide	ND	10	mg/L		1	U	07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	23:47	amm
Chloride	40	1	mg/L		1	lb	07/12/2023	11:07	ldm	EPA 300.0	07/13/2023	06:43	krh
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	20:00	lcr
Nitrate Nitrogen	12.1	0.1	mg/L		1		07/12/2023	11:07	ldm	EPA 300.0	07/13/2023	06:43	krh
Nitrogen, Total as Nitrogen	12.1	0.5	mg/L		1		07/28/2023	08:46	sta	Calc.	07/31/2023	20:00	lcr
Nitrate + Nitrite as N	12.1	0.1	mg/L		1		07/12/2023	11:07	ldm	EPA 300.0	07/13/2023	06:43	krh
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	20:00	lcr
Conductivity	484	1	umhos/cm		1		07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	23:47	amm
Sulfate Sulfur	8.40	0.17	mg/L		1	1	07/12/2023	11:07	ldm	EPA 300.0	07/13/2023	06:43	krh
Solids, Total Dissolved (TDS)	300	20	mg/L		1		07/14/2023	10:00	ctl	SM 2540 C	07/17/2023	11:10	ctl
Calcium	42	1	mg/L		1		07/14/2023	06:55	ejc	EPA 200.7	07/14/2023	17:29	ac
Magnesium	3	1	mg/L		1		07/14/2023	06:55	ejc	EPA 200.7	07/14/2023	17:29	ac
Sodium	46	1	mg/L		1		07/14/2023	06:55	ejc	EPA 200.7	07/14/2023	17:29	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, Dil.=Dilution



ENVIRONMENTAL AGRICULTURAL

Analytical Chemists

August 3, 2023

Innovative Ag Services, LLC

Lab No. : VI 2344527

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 (CC 2382234-001) (SP 2311901-001)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	103%	85-115	
			MS	mg/L	12.00	76.5%	75-125	
			MSD	mg/L	12.00	79.5%	75-125	
			MSRPD	mg/L		0.6%	≤20.0	
			MS	mg/L	12.00	117%	75-125	
			MSD	mg/L	12.00	97.4%	75-125	
			MSRPD	mg/L		8.0%	≤20.0	
Magnesium	200.7	07/14/2023:207699EJC (CC 2382234-001) (SP 2311901-001)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	106%	85-115	
			MS	mg/L	12.00	80.0%	75-125	
			MSD	mg/L	12.00	83.5%	75-125	
			MSRPD	mg/L		0.9%	≤20	
			MS	mg/L	12.00	114%	75-125	
			MSD	mg/L	12.00	101%	75-125	
			MSRPD	mg/L		7.3%	≤20	
Sodium	200.7	07/14/2023:207699EJC (CC 2382234-001) (SP 2311901-001)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	103%	85-115	
			MS	mg/L	12.00	37.4%	<¼	406
			MSD	mg/L	12.00	56.8%	<1/4	
			MSRPD	mg/L		1.9%	≤20.0	
			MS	mg/L	12.00	253%	<¼	406
			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 analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
- MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
- ND : Non-detect - Result was below the DQO listed for the analyte.

Explanation

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

August 3, 2023

Innovative Ag Services, LLC

Lab No. : VI 2344527

Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO ₃)	2320B	07/17/2023:207798AMM	ND	mg/L		0.2%	10	406
Bicarbonate	2320B	(CC 2381960-001)	Dup	mg/L		0.2%	10	
Carbonate	2320B	(CC 2381960-001)	Dup	mg/L			10	
E. C.	2320B	(CC 2381960-001)	Dup	umhos/cm		0.1%	5	
Solids, Total Dissolved	2540CE	07/14/2023:207703CTL (SP 2311840-005) (SP 2311840-005)	Blank	mg/L		ND	<20	
			LCS	mg/L	993.7	99.0%	90-110	
			Dup	mg/L		1.59%	5	
			Dup	mg/L		2.13%	5	
Chloride	300.0	07/12/2023:207721LDM (CC 2381926-002) (CC 2381926-001)	Blank	mg/L		1	<1	
			LCS	mg/L	25.00	101 %	90-110	
			MS	mg/L	50.00	84.2 %	85-121	435
			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
			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 (CC 2381926-002) (CC 2381926-001)	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	99.8 %	90-110	
			MS	mg/L	40.00	104 %	85-119	
			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	
			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 (CC 2381926-002) (CC 2381926-001)	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	99.8 %	90-110	
			MS	mg/L	40.00	104 %	85-119	
			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	
			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 (CC 2381926-002) (CC 2381926-001)	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	102 %	90-110	
			MS	mg/L	100.0	70.6 %	82-124	435
			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	
			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 (SP 2311944-003) (SP 2311944-004)	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	94.9%	73-124	
			MS	mg/L	12.00	94.6%	54-136	
			MSD	mg/L	12.00	94.6%	54-136	
			MSRPD	mg/L		0.0%	≤27	
			MS	mg/L	12.00	93.8%	54-136	
			MSD	mg/L	12.00	92.6%	54-136	
			MSRPD	mg/L		1.2%	≤27	

Definition

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

Explanation

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

23441527



Laboratory Analysis Work Order

N° 41025

ID: # 0314

SITE NAME: TRI J DAKY

ROI
21.4°C

Billing: IAS

LABORATORY: FGL

Authorized Copy Release to:

Innovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

- W1 EC, NO₃N (Dom)
 W2 EC, NO₃N, TDS, TN (Irr)
 W3 NH₄-N (Ammonium)
 W4 EC, NO₃N, Ca, Mg, Na, K, HCO₃, CO₃, SO₄S, Cl, TDS (Dom, GM)
 W5 EC, NO₃N, TDS, TN, Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl (Irr, GM)
 W6 NO₃N, NO₂ (Dom ILRP, Annually)
 W7 Ca, Mg, Na, K, HCO₃, CO₃, SO₄, Cl + Lab Filtering (GWM)
 W8 Other: _____

Plant Tissue

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

Process Waste Water (lagoon)

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

Manure

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

Soil

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

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH ₄ N *	pH	Temp
1	IRP WEL #4	W5	7/11/23 12:00	SEAN	✓		
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 samples, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 st		IAS		7/11/23 5:00
2 nd		FGL	7-11-23 15:20	
3 rd		FGL		7-11-23 15:35
4 th		FGL	7/11/23 15:35	
LABORATORY USE ONLY		FGL	7/11/23 17:30	
Logged In By: _____		GLS	7/11/23 17:30	
Total Samples: _____		Laboratory #: _____		