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12th January 2021

Darling River Meats
Mitchell Highway
Bourke NSW, 2840
Attention: Mr Edward Jonson / Mr George Tanos
Re: Water Report

Dear Edward / George,
Following is the water report for the Roadside Bore and the Paddock Bore.
The E.coli level for the Roadside Bore and the Paddock Bore was <2 CFU.

DATE OF COLLECTION		17/12/20	17/12/20
SAMPLES		ROADSIDE BORE #1	PADDOCK BORE #2
pH		6.8	6.6
Conductivity	mS/cm	18.6	28.7
Sodium	mg/L	3010	5080
Potassium	mg/L	46	46
Calcium	mg/L	870	1410
Magnesium	mg/L	400	680
Nitrate NO3-N	mg/L	0.10	0.94
Nitrite NO2-N	mg/L	<0.1	<0.1
Oxidised Nitrogen NOx-N	mg/L	0.11	0.95
Ammonia (Total)	mg/L	0.7	0.4
Total Nitrogen	mg/L	3.0	6.4
Total Kjeldahl Nitrogen	mg/L	2.9	5.4
Phosphate PO4-P	mg/L	<0.1	<0.1
Total Phosphorus	mg/L	1.0	0.40
Sodium Absorption Ratio		21.2	27.8

- The standing water level for the roadside bore is 17metres (mbgl)
- The paddock bore is 15metres (mbgl)
- The Roadside Bore Temperature is 24.0 degrees °C
- The Paddock Bore Temperature is 24.2 degrees °C

Please don't hesitate to contact me if you have any questions or queries.

Kind Regards
Biochem Water Pty Limited

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Account Manager
0419840404

Richard Brown
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25th November 2019

Darling River Meats
Mitchell Highway
Bourke NSW, 2840
Attention: Mr James Turner / Mr George Tanos
Re: Water Report

Dear James / George,
Following is the water report for the Roadside Bore and the Paddock Bore.

DATE OF COLLECTION		25/11/19	25/11/19
SAMPLES		ROADSIDE BORE #1	PADDOCK BORE #2
pH		7.2	7.1
Conductivity	mS/cm	9.3	16.4
Sodium	mg/L	1290	2500
Potassium	mg/L	21	22
Calcium	mg/L	350	140
Magnesium	mg/L	150	340
Nitrate NO3-N	mg/L	0.14	0.46
Nitrite NO2-N	mg/L	<0.1	<0.1
Oxidised Nitrogen NOx-N	mg/L	0.14	0.47
Ammonia (Total)	mg/L	0.1	<0.1
Total Nitrogen	mg/L	1.1	1.3
Total Kjeldahl Nitrogen	mg/L	1.0	0.8
Phosphate PO4-P	mg/L	<0.1	<0.1
Total Phosphorus	mg/L	<0.1	<0.1
E.Coli	cfu/100mL	<10	<10
Sodium Absorption Ratio		14.5	26.0

- The standing water level for the roadside bore is 17metres (mbgl)
- The paddock bore is 14metres (mbgl)
- The Roadside Bore Temperature is 23.8 degrees °C
- The Paddock Bore Temperature is 24.2 degrees °C

Please don't hesitate to contact me if you have any questions or queries.

Kind Regards
Biochem Water Pty Limited

Richard Brown
Account Manager
0419840404

5. Results

The statistical analysis of the results is provided in the following tables. The raw data is provided in Appendix 1.

Table 1. Groundwater SWL and field parameters

	SWL (m)	Temperature (°C)	pH	EC (mS/cm)	DO (ppm)	Redox (mV)
Min	12.421	22.7	4.0	16.7	2.29	54.10
Max	17.542	26.7	7.6	37.9	7.65	299.00
STD	1.655	1.0	0.9	7.6	1.64	76.49
Average	15.175	24.5	6.2	24.6	4.52	168.81
CI	7.01	11.31	2.88	12.91	2.09	77.98
95% CI	22.19	35.79	9.12	37.54	6.60	246.79

Table 2. Groundwater parameter results (mg/L)

	EC (mS/cm)	Chloride	Sulfate	Calcium	Magnesium	Potassium	Sodium
Min	18	5900	1500	720	330	55	2900
Max	49	15000	2600	1700	770	85	5900
STD	11	3546	351	401	190	11	1299
Average	30	9711	1989	1197	528	67	4261
CI	13.86	4486.22	918.80	552.82	244.07	31.13	1968.50
95% CI	43.86	14197.33	2907.69	1749.49	772.41	98.52	6229.61

Table 3. Groundwater nutrient results (mg/L)

	Total Nitrogen	Total Phosphorous	Nitrate as N	Nitrite as N	Total Kjeldahl Nitrogen
Min	0.23	0.03	0.23	0.01	0.05
Max	1.50	0.62	1.50	0.20	0.59
STD	0.31	0.19	0.30	0.08	0.15
Average	0.73	0.14	0.75	0.04	0.24
CI	0.35	0.07	0.38	0.03	0.12
95% CI	1.07	0.21	1.13	0.07	0.36

Table 4. Groundwater metal results (ug/L)

	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Zinc
Min	1	0	1	1	ND	1	6
Max	3	1	4	25	ND	6	86
STD	1	0	1	6	ND	1	19
Average	2	0	3	5	ND	3	26
CI	1.24	0.25	1.32	2.51	ND	1.34	12.09
95% CI	3.33	0.57	4.00	7.64	ND	4.17	38.25

6. Conclusion

The statistical analysis of the background monitoring of the groundwater on the small stock abattoir at Lot 17 DP753546 is suitable for use as a comparison to results obtained during groundwater monitoring during abattoir operation.