

## **Knowledge grows**

19th October 2020

Our Reference: 200-200-LET-DWER-0013

Your Reference: MS870

Mr Ian Munro
Manager, Compliance (Ministerial Statements)
Department of Water and Environmental Regulation
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JOONDALUP WA 6027

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Dear lan,

## Ministerial Statement No. 870, Condition 8 - Yara Pilbara Nitrates Groundwater Monitoring Results

In accordance with Condition 8-4 of Ministerial Statement 870, Yara Pilbara Nitrates (YPN) is required to conduct monitoring of all groundwater bores every six months. In the event that monitoring indicates an exceedance of trigger levels, Condition 8-5 requires that the results be reported to the CEO.

Results of the September 2020 groundwater monitoring conducted on the 9th (MW1) and 22nd of September, are provided below in Table 1, with exceedances of trigger levels highlighted.

Elevated levels of nitrogen species continue to be recorded, with management of the contamination ongoing in consultation with the Contaminated Sites Branch.

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**Table 1: Six-Monthly Groundwater Monitoring Results** 

Date	Units	Trigger Limits	MW1	MW2	MW3	MW4	MW5
Aluminium (Filtered)	mg/L	0.021	0.007	<0.005	<0.005	<0.025	<0.005
Alkalinity (total) as CaCO3	mg/L	561	257	244	387	157	205
Arsenic (Filtered)	mg/L	NA	<0.001	<0.001	<0.001	<0.001	<0.001
Calcium (Filtered)	mg/L	1,210	82	67.5	66.2	702	567
Cadmium (Filtered)	mg/L	NA	<0.0001	<0.0001	<0.0002	<0.0020	<0.0005
Chloride	mg/L	95,700	352	858	2,620	64,800	5,120
Chromium (III) (Filtered)	mg/L	NA	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium (VI) (Filtered)	mg/L	NA	<0.004	<0.004	<0.004	<0.004	<0.004
Copper (Filtered)	mg/L	NA	0.0008	0.0008	0.0005	0.002	0.0007
Iron (Filtered)	mg/L	0.26	<0.005	<0.005	<0.005	<0.025	<0.005
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium (Filtered)	mg/L	5,170	26.3	43.1	168	3,040	848
Manganese (Filtered)	mg/L	0.242	0.081	0.004	<0.001	0.18	0.003
Ammonium (NH4+)	mg/L	NA	<0.01	84	<0.01	34	410
Ammonia as N (NH3-N)	mg/L	0.04	<0.01	65	<0.01	27	320
Nitrate (as NO3) calculated	mg/L	9.57	15	292	885	1,018	15,936
Nitrogen (Total)	mg/L	5.6	4.4	130	260	520	4,000
Nickel (Filtered)	mg/L	NA	0.011	<0.001	<0.002	0.038	<0.005
Oil and Grease	mg/L	NA	<10	<10	<10	<10	<10
Lead (Filtered)	mg/L	NA	0.0002	<0.0001	<0.0002	0.017	<0.0005
TDS	mg/L	143,000	970	2,000	6,800	100,000	31,000
TSS	mg/L	2,090	63	1	<1	22	10
Zinc (Filtered)	mg/L	0.052	0.01	0.009	0.01	0.04	0.018
pH (in-field)		6-8.4	8.13	7.48	7.72	7.39	6.88

Please do not hesitate to contact the undersigned on 08 9183 4043 should you have any queries. Yours Sincerely

Dr Ty Hibberd

Health, Environment, Safety & Quality Manager

**Yara Pilbara Nitrates**