

LABORATORY ANALYTICAL REPORT

CLIENT : GAMTOOS IRRIGATION BOARD							
ATT : Mr. Leon Grundling							
SAMPLE ID:	Gaugu dam inflow	Kouga dam outlet	B. Canal	Kok Se Pias	Patensie	D. Canal	K. Canal
TOSCALAB SAMPLE NO.	WL0578	WL0579	WL0580	WL0581	WL0582	WL0583	WL0584
SAMPLE NUMBER:	1	2	3	4	5	6	7
							8

PROJECT: Canal Monitoring
JOB CARD no.: C18476
DATE SAMPLED: 11-04-2018
DATE DELIVERED: 11-04-2018
SAMPLING PROCEDURE: Customer
N/A

PARAMETER	UNITS	METHOD REF.	MEASUREMENT UNCERTAINTY	LIMITS (SANS 241:2015)	SANS 241 RISK CLASS	RESULTS							
						Gaugu dam inflow	Kouga dam outlet	B. Canal	Kok Se Pias	Patensie	D. Canal	K. Canal	Lyn 106
Antimony *	mg/L	SANS 11885	-	≤ 0.02	Chronic Health			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Aluminium (S) *	mg/L	Atomic absorption	-	≤ 0.3	Operational			<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Asenic (S) *	mg/L	SANS 11885	-	≤ 0.01	Chronic Health			<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Calcium *	mg/L	Atomic absorption	-	N/A	N/A			64.00	17.70	24.00	48.00	100.00	62.00
Chromium *	mg/L	Atomic absorption	-	≤ 0.05	Chronic Health			<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Cobalt *	mg/L	Atomic absorption	-	≤ 0.5	Chronic Health			<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Copper (Dissolved) *	mg/L	Atomic absorption	-	≤ 2	Chronic Health			0.021	0.011	0.011	0.07	0.007	0.006
Cadmium *	mg/L	Atomic absorption	-	≤ 0.003	Chronic Health			<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Iron *	mg/L	Atomic absorption	-	≤ 2	Chronic Health			2.00	2.40	2.00	2.10	1.74	2.20
Lead *	mg/L	APHA 3500-Pb	-	Aesthetic ≤ 0.3	Chronic Health			0.24	0.27	0.24	0.25	0.25	0.26
Magnesium *	mg/L	Atomic absorption	-	N/A	N/A			393.00	2.40	2.20	30.00	38.00	20.00
Manganese *	mg/L	Atomic absorption	-	Chronic Health ≤ 0.4	Chronic Health			0.01	0.02	0.01	0.01	0.01	0.02
Mercury (S) *	mg/L	Atomic absorption	-	≤ 0.006	Chronic Health			<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Nickel *	mg/L	APHA 3500-Ni	-	≤ 0.07	Chronic Health			<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Potassium *	mg/L	Atomic absorption	-	n/a	n/a			7.10	6.30	5.90	5.50	5.20	5.20
Selenium (S) *	mg/L	SANS 11885	-	≤ 0.04	Chronic Health			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium *	mg/L	Atomic absorption	-	≤ 200	Aesthetic			148.00	84.00	82.00	86.00	142.00	68.00
Vanadium *	mg/L	SANS 11885	-	≤ 0.2	Chronic Health			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc *	mg/L	Atomic absorption	-	≤ 5	Aesthetic			<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Ecot *	count/100ml	ColiCount 18	-	0	Acute Health	<1	2	12	9	107	24	12	30
Heterotrophic plate count *	count/100ml	Idea Simplate	-	< 1000	Operational	1280	60	>3000	>3000	>3000	>3000	>3000	>3000
Total coliforms	count/100ml	ColiCount 18	-	< 10	Operational	>2419	>2419	>2419	>2419	>2419	>2419	>2419	>2419
Ammonia	mg/L NH3 N	Hach 10031	0.01	≤ 1.5	Aesthetic	0.4	<0.1	53.41	22.8	23.2	25.1	58.67	48.10
Chloride	mg/L Cl-	SANS 9297	12.98	≤ 300	Aesthetic	76.1	228	26.5	26.8	26.2	25.7	26.50	25.10
Colour Pt-Co *	mg/L	Hach 8025	< 15	≤ 170	Aesthetic	26.5	228	0.01	0.009	0.009	0.009	0.001	0.011
Conductivity at 25degC	mS/m	SANS 7888	0.02	≤ 0.2	Chronic Health	17.64	16.97	18.31	18.31	18.31	15.30	19.65	19.65
Cyanide (Free) *	mg/L CN-	N/A	0.01	N/A	N/A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved organic carbon *	mg/L C	Hach 10225	0.06	≤ 1.5	Chronic Health	2.20	1.20	1.00	1.00	1.00	1.10	1.00	1.00
Nitrate	mg/L N	Hach 10206	1.05	≤ 0.9	Acute Health	0.017	0.024	0.018	0.023	0.018	0.023	0.016	0.023
Nitrite *	mg/L N	Hach 10019	-	≤ 5 and ≤ 9.7	Operational	7.15	7.29	7.2	7.2	7.36	7.36	7.35	7.50
pH at 25degC	pH Units	Electrometric	0.21	Acute Health ≤ 500	Operational	21	16	17	17	21	21	20.00	23.00
Sulphate	mg/L	Hach 8051	7.09	Aesthetic ≤ 250	Aesthetic	315	130	125	125	300	270.00	275.00	275.00
Total dissolved solids	mg/L	SANS 5213	0.22	Operational ≤ 1	Aesthetic	37.4	49.2	46.3	46.3	40.2	35.40	43.30	43.30
Turbidity	NTU	Hach 8195		Aesthetic ≤ 5									

Remarks: All Highlighted values fall outside the limits set for suitability for human consumption in the SANS 241:2015 standard.

The above test results are pertinent only to the samples received and tested at the laboratory. This report shall not be reproduced, except in full, without the prior consent of Toscalab (Pty) Ltd. Raw sample data is available on request. * = non-accredited test (s) = Subcontracted test.

Results marked "Subcontracted Test (s)" in the report are not included in the SANAS Schedule of Accreditation for the laboratory.

Deviation from Test Method SANAS 5213. Use oven temperature at 105°C instead of 180°C.

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INTERPRETATION:

END OF REPORT

Name: Zukio Ntomele
Position: Technical Signatory (Chemical)

