

Rapid • Reliable • Resourceful

20 Pentrich Road, PO Box 3391, Pietermaritzburg, 3200, KwaZulu-Natal, South Africa • S 29°37.934, E 30°22.685
 Tel: +27 (0) 33 346 1444 • Fax: +27 (0) 33 346 1445 • E-mail: talbot@talbot.co.za • http://www.talbot.co.za

2015/01/19

ANALYTICAL REPORT

OUR REF: uMGUNGUNDLOVU MUNICIPALITY 380/15 (Interim)
COMPANY NAME: uMGUNGUNDLOVU MUNICIPALITY
CONTACT ADDRESS: P O BOX 3235, PIETERMARITZBURG, 3200
CONTACT PERSON: ROYAL NZUZA
SAMPLE TYPE: WASTEWATER
DATE SUBMITTED: 2015/01/14

Determinand	Units	Method No	DWA General Effluent Standards	Results	
				380/15	381/15
				APPELSBOSCH/STW FINAL 13.01.15	APPELSBOSCH/STW RAW 13.01.15
Ammonia	mg N/l	64	6	8.29	38.8
Chemical oxygen demand (total)	mg O ₂ /l	3	75	58	489
Chloride	mg Cl/l	16	Not specified	49	
Conductivity at 25°C	mS/m	2	150	39	67
<i>E. coli</i>	colonies per 100ml	31	1000	0	
Free chlorine*	mg Cl ₂ /l	-	0.25	0.15	
Nitrate/Nitrite	mg N/l	65	15	0.15	
Orthophosphate	mg P/l	66	10	3.52	2.87
Oxygen absorbed	mg O ₂ /l	39	10	8	31
pH at 25°C	pH units	1	5.5 – 9.5	6.7	7.4
Suspended solids at 105°C	mg/l	5	25	10	138
Total alkalinity	mg CaCO ₃ /l	10	Not specified	79	187

Determinand	Units	Method No	Results	
			382/15	383/15
			APPELSBOSCH/STW SECONDARY 13.01.15	APPELSBOSCH/STW ML 13.01.15
Ammonia	mg N/l	64	0.26	
Nitrate/Nitrite	mg N/l	65	6.14	
Oxygen absorbed	mg O ₂ /l	39	14	
pH at 25°C	pH units	1	7.7	6.8
Suspended solids at 105°C	mg/l	5		865
Total alkalinity	mg CaCO ₃ /l	10	28	

Directors: Dr MMJ-F Talbot, Mr FD Urbaniak-Hedley (British), Mrs VR Talbot
 Talbot & Talbot (Pty) Ltd - Company Registration Number 2000/021732/07

Determinand	Units	Method No	Results	
			384/15	385/15
			APPELSBOCH DOWNSTREAM 13.01.15	APPELSBOSCH UPSTREAM 13.01.15
Ammonia	mg N/l	64	0.09	0.27
Chemical oxygen demand (total)	mg O ₂ /l	3	29	62
<i>E. coli</i>	colonies per 100ml	31	106	52
Nitrate/Nitrite	mg N/l	65	2.25	0.06
Orthophosphate	mg P/l	66	0.068	<0.002
pH at 25°C	pH units	1	7.7	6.5
Suspended solids at 105°C	mg/l	5	18	120

Technical Signatory: Chemistry _____ Bacteriology _____

- This report relates only to the samples tested. This report shall not be reproduced, except in full, without the written approval of **TALBOT LABORATORIES**.
- Tests marked with an asterisk (*) in this report are not SANAS accredited and are not included in the Schedule of Accreditation for our laboratory.
- Opinions and interpretations expressed herein are outside the scope of SANAS accreditation.
- Results reported in () were analysed after preservation according to the laboratory's preservation procedure.
- Note: Results marked with a double asterisk (**) have been sub-contracted to a peer laboratory.
- Note: Estimates of Uncertainty of Measurement may be obtained from the laboratory if required.

**APPENDIX
UNCERTAINTY OF MEASUREMENT**

Determinand	Units	Uncertainty of measurement (MoU)	Determinand	Units	Uncertainty of measurement (MoU)
Ammonia	mg/l	± 0.24	Oxygen absorbed	mg/l	± 0.44
Chemical oxygen demand (filtered)	mg/l	± 7.00	pH at 25°C	pH units	± 0.06
Chemical oxygen demand (sett)	mg/l	± 7.00	Potassium	mg/l	± 1.12
Chemical oxygen demand (total)	mg/l	± 7.00	Sodium	mg/l	± 5.08
Chloride	mg/l	± 2.10	Sulphate	mg/l	± 2.90
Conductivity at 25°C	mS/m	± 0.46	Suspended solids at 105°C	mg/l	± 4.08
Dissolved calcium	mg/l	± 1.28	Total iron	mg/l	± 0.03
Dissolved copper	mg/l	± 0.02	Total alkalinity	mg/l	± 3.54
Dissolved iron	mg/l	± 0.03	Total calcium	mg/l	± 1.28
Dissolved lead	mg/l	± 0.04	Total copper	mg/l	± 0.02
Dissolved magnesium	mg/l	± 2.58	Total dissolved solids at 180°C	mg/l	± 3.76
Dissolved manganese	mg/l	± 0.04	Total lead	mg/l	± 0.04
Dissolved nickel	mg/l	± 0.04	Total magnesium	mg/l	± 2.58
Dissolved zinc	mg/l	± 0.03	Total manganese	mg/l	± 0.04
Fluoride	µg/l	± 72.24	Total nickel	mg/l	± 0.04
Hexavalent chromium	mg/l	± 0.02	Total solids at 105°C	mg/l	± 1.74
Nitrate/Nitrite	mg/l	± 0.24	Total zinc	mg/l	± 0.03
Orthophosphate	mg/l	± 0.02	Turbidity	NTU	± 0.34

Estimates of Uncertainty of Measurement for microbiological analyses can be provided on request.