

KNYSNA MUNICIPALITY

Notice is hereby given of a

**INFRASTRUCTURE SERVICES COMMITTEE
MEETING**

which will be held on

Monday, 26 April 2021

at

14:00

in the Council Chamber and on Microsoft Teams
to consider the following items

MUNICIPAL OFFICES
KNYSNA

MR DJ ADONIS
ACTING MUNICIPAL MANAGER

SUPPLEMENTARY AG E N D A

Members: Chairperson **Cllr T Matika**
Cllr P Bester
Cllr L Davis
Cllr M Naki
Cllr S Ngqezu

INFRASTRUCTURE SERVICES COMMITTEE MEETING

AGENDA
26 APRIL 2021

7.11	HIGH COLOUR IN POTABLE WATER SYSTEM - MARCH AND APRIL 2021	3
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7.11

**HIGH COLOUR IN POTABLE WATER SYSTEM -
MARCH AND APRIL 2021**

REPORT FROM THE DIRECTOR TECHNICAL SERVICES

PURPOSE OF THE REPORT

To inform Council of the cause of unaesthetically pleasing water during March 2021.

PREVIOUS RESOLUTIONS

None

BACKGROUND/ DISCUSSION

There were three distinct incidents that occurred in Knysna potable water system during March and April 2021.

Discoloured Water in Knysna (15 -30 March 2021)

The rainfall for March 2021 was 60mm and the colour varied from 100 to 450 mg/l as Pt.

The maximum pumping also was in anticipation of commissioning the Charlesford/ Eastford Raw Water Pumping Scheme.

During the heavy rainy spells, from 11 to 15 March 2021, the colour increased significantly and varied constantly, which made flocculent dosing very difficult.

As a result, the changes to the colour, made the dosing less affective and caused carry-over into the system.

This affected the entire Knysna for the above period.

To rectify the above the department blended the water from Knysna River with water from the Akkerkloof Dam. This decreased the colour while experts assisted with different dosing regimens. A more accurate dosing chart was developed and the adjustments, on the dosing system, were done more frequent.

Water Outage in Hornlee (24 to 26 March 2021)

Only limited water could be abstracted from the Akkerkloof Dam during the 5-day commissioning of the Charlesford/Eastford Raw Water Scheme.

Therefore only limited flow reached Vigilance Drive Pump Station, which had negative impact on Bigai intermediate Reservoir and a knock on effect on the Sunridge and Knoetsie water zones as well.

On 24 March 2021 two water breaks also occurred on the pumping main feeding the Sunridge Reservoir.

Due to the above, the Sunridge and Knoetsie Reservoirs ran critically low and the water mixed with residue in the reservoir that caused brown water in the water reticulation system.

The department actioned the following activities to maximise the flow to the reservoirs:

- Installed a pump at Bigai Spring;
- Close other system to maximise flow to Hornlee Reservoirs;
- Action water trucks to boost storage at reservoirs; and
- Water trucks to roam areas for water collection.

Water Outage in Vermont and Fraaisig (16 & 17 April 2021)

The department fixed three water breaks on the 315mm diameter bulk gravity main and had to recommission the pipeline.

During the commissioning on 16 April 2020, no water reached the Vigilance Drive Water Pump Station.

The commissioning was stopped and we reverted to the temporary supply system.

After we reverted we also did not get the required flow rate at the pump station.

The Bigai Reservoir ran low and caused residue to mix with water on the bottom of reservoir, which caused the brown water.

One valve did not close properly and another valve, on the same line, was also closed which isolated the bulk main and restored the flow rate to Vigilance Drive Pump Station.

The top Bigai Zone was scoured and the system water quality was restored.

During the above incidents, the communication department was updated to communicate to the public.

In all the above incidents, Messrs. Garden Route District Council tested the water and no e-coli bacteria was found in the system.

The sample results are attached, which an independent SANAS laboratory verified.

FINANCIAL IMPLICATIONS

The cost not known at this time.

RECOMMENDATION OF THE MUNICIPAL MANAGER

That the report on the colour in the potable water system during March and April 2021, be noted.

APPENDIX / ADDENDUM

ANNEXURE 1: Garden Route Municipality Drinking Water Testing Results

ANNEXURE 2: Letter from AL Abbott & Associate (PTY) Ltd on Garden Route District Municipality Water Testing Analysis

INFRASTRUCTURE SERVICES COMMITTEE MEETING

AGENDA
26 APRIL 2021

FINAL CERTIFICATE OF ANALYSIS

COA N°:	672322-0
COA Date:	28/03/2021
Page	1 / 1

Customer: Garden Route District Municipality - GRJ
Order N°: DO031914
Client Reference N°: K 01053
Project N°: GRJ 21-002472



Analysed By Swift Siliker (Pty) Ltd via Merieux NutriSciences 4 Pearl Street, Tamsul Industrial, George, Western Cape, South Africa
Phone: +27448730858 Fax: +27448730543 E-mail: za.customercare@mxns.com

Received from Garden Route District Municipality - GRJ P.O. Box 12, George, 6530, Western Cape
E-mail: lindon@gardenroute.gov.za



To: Garden Route District Municipality - GR.
Mr. Linden Herwels
P.O. Box 12 George
6530
Western Cape

SAMPLE DESCRIPTION

Lab Sample Ref #: GRJ 21-002472-001 Sample N°: 3672058 Test Date: 28/03/2021
Category Detail: Water Sample Condition: SEALED Date Received: 28/03/2021
Product Description*: Drinking water - Davidson Str
Client Sample N°: K 1053
COA Remark*: Date: 25/03/2021; Time: 09:15; Client: Davidson Str.

ANALYTICAL RESULTS

Tests	Analysis Start Date	Results	Units	Limits (Target value)
<input checked="" type="checkbox"/> Coliforms METHOD: SWJM 48	26/03/2021	No Growth	cfu/100ml	Result <= 10
<input checked="" type="checkbox"/> Escherichia coli METHOD: SWJM 45	26/03/2021	No Growth	cfu/100ml	Not Detected /100ml

Comment: Temp: 4.8°C

Results validated on 28/03/2021

Edeline Constance

Technical Signatory

Changed Data

Accredited analysis Non Accredited analysis Non Conformance Customer provided data

TMA = Total Microbial Activity / Total Viable Plate Count.

No growth = Not detected / less than the lower detection limit of the test method, for the specified sample type / volume of sample tested.

Tests marked with a link in this report are included in the SANAS Schedule of Accreditation for this laboratory T0052.

Tests marked with a * in this report are not included in the SANAS Schedule of Accreditation for this laboratory T0052.

** Data provided by the customer.

Tests marked with a # in this report are Subcontracted Tests and are not included in the SANAS Schedule of Accreditation for this laboratory T0052.

The test report relates only to the specific item submitted for testing. It furnishes or implies no guarantee whatsoever, in respect of a similar item that has not been tested.

The test report applies to the sample as received where the laboratory has not been responsible for the sampling stage.

Opinions and interpretations expressed in this report are not included in the SANAS Schedule of Accreditation for this laboratory T0052.

The test report shall not be reproduced except in full without written approval of Swift Siliker (Pty) Ltd via Merieux NutriSciences.

INFRASTRUCTURE SERVICES COMMITTEE MEETING

AGENDA
26 APRIL 2021

FINAL CERTIFICATE OF ANALYSIS

COA N°:	572320-0
COA Date:	29/03/2021
Page	1 / 1
Customer: Garden Route District Municipality - GRJ	
Order N°:	DO031914
Client Reference N°:	K 01052
Project N°:	GRJ 21-002471
	
Analysed By Swift Silliker (Pty) Ltd Via Merieux NutriSciences 4 Pearl Street, Tamsui Industrial, George, Western Cape, South Africa	
Phone: +27448730855 Fax: +27448730543 E-mail: za.customercare@mxns.com	
Received from Garden Route District Municipality - GRJ P.O. Box 12, George, 6530, Western Cape	
E-mail: lindon@gardenroute.gov.za	



To: Garden Route District Municipality - GR.
Mr. Linden Herwels
P.O. Box 12 George
6530
Western Cape

SAMPLE DESCRIPTION

Lab Sample Ref #: GRJ 21-002471-001 Sample N°: 3672031 Test Date: 25/03/2021
Category Detail: Water Sample Condition: SEALED Date Received: 26/03/2021
Product Description*: Tanker water
Client Sample N°*: K 1052
COA Remark*: Date: 25/03/2021; Time: 08:30; Client: FG23YDGP

ANALYTICAL RESULTS

Tests	Analysis Start Date	Results	Units	Limits [Target value]
<input checked="" type="checkbox"/> Coliforms METHOD: SWJM 48	25/03/2021	231	cfu/100ml	Result <= 10
<input checked="" type="checkbox"/> Escherichia coli METHOD: SWJM 45	26/03/2021	No Growth	cfu/100ml	Not Detected /100ml

Comment: Temp: 4.3°C

Results validated on 29/03/2021

Edeline Constance
Technical Signatory
Charged Data

Accredited analysis • Non-Accredited analysis NC Not Conformance ** Customer provided data

TMA = Total Microbial Activity / Total Viable Plate Count.
No growth = Not detected / less than the lower detection limit of the test method, for the specified sample type / volume of sample tested.
Tests marked with a tick in this report are included in the SANAS Schedule of Accreditation for this laboratory T0050.
Tests marked with a * in this report are not included in the SANAS Schedule of Accreditation for this laboratory T0050.
** Data provided by the customer.
Tests marked with a plane in this report are Subcontracted Tests and are not included in the SANAS Schedule of Accreditation for this laboratory T0050.
This test report relates only to the specific item submitted for testing. It furnishes or implies no guarantee whatsoever, in respect of a similar item that has not been tested.
The test report applies to the sample as received where the laboratory has not been responsible for the sampling stage.
Opinions and interpretations expressed in this report are not included in the SANAS Schedule of Accreditation for this laboratory T0050.
This test report shall not be reproduced except in full without written approval of Swift Silliker (Pty) Ltd Via Merieux NutriSciences.

INFRASTRUCTURE SERVICES COMMITTEE MEETING

AGENDA
26 APRIL 2021

FINAL CERTIFICATE OF ANALYSIS

COA N°: 572317-0
COA Date: 29/03/2021
Page: 1 / 1



Customer: Garden Route District Municipality - GRJ
Order N°: DO031914
Client Reference N°: K 00499
Project N°: GRJ 21-002489

Analysed By Swift Silliker (Pty) Ltd Via Merieux NutriSciences
4 Pearl Street, Tamsui Industrial, George, Western Cape, South Africa
Phone: +27448730855 Fax: +27448730543
E-mail: za.customercare@mons.com

To: Garden Route District Municipality - GR
Mr. Linden Herwels
P.O. Box 12 George
6530
Western Cape

Received from Garden Route District Municipality - GRJ
P.O. Box 12, George, 6530, Western Cape
E-mail: lindon@gardenroute.gov.za

SAMPLE DESCRIPTION

Lab Sample Ref #: GRJ 21-002489-001 Sample N°: 3672009 Test Date: 26/03/2021
Category Detail: Water Sample Condition: SEALED Date Received: 26/03/2021
Product Description*: Drinking water - Bitou Round table
Client Sample N°*: K 00499
COA Remark*: Date: 25/03/2021, Time: 09:30, Client: Principal Bitou Round Table

ANALYTICAL RESULTS

Tests	Analysis Start Date	Results	Units	Limits (1/2000 0/100)	
<input checked="" type="checkbox"/> Coliforms METHOD: SWJM 48	26/03/2021	350	cfu/100ml	Result <= 10	NC
<input checked="" type="checkbox"/> Escherichia coli METHOD: SWJM 45	26/03/2021	No Growth	cfu/100ml	Not Detected /100ml	

Comment: Temp: 4.8°C

Results validated on 29/03/2021

Edeline Constance
Technical Signatory
/ Changed Date

Accredited analysis * Non-Accredited analysis NC Non-Conformance ** Customer provided data

TMA = Total Microbial Activity / Total Viable Plate Count.
No growth = Not detected / less than the lower detection limit of the test method, for the specified sample type / volume of sample tested.
Tests marked with a tick in this report are included in the SANAS Schedule of Accreditation for this laboratory T0050.
Tests marked with a * in this report are not included in the SANAS Schedule of Accreditation for this laboratory T0050.
** Data provided by the customer.
Tests marked with a plane in this report are Subcontracted Tests and are not included in the SANAS Schedule of Accreditation for this laboratory T0050.
The test report relates only to the specific item submitted for testing. It furnishes or implies no guarantee whatsoever, in respect of a similar item that has not been tested.
The test report applies to the sample as received where the laboratory has not been responsible for the sampling stage.
Opinions and interpretations expressed in this report are not included in the SANAS Schedule of Accreditation for this laboratory T0050.
The test report shall not be reproduced except in full without written approval of Swift Silliker (Pty) Ltd Via Merieux NutriSciences.

INFRASTRUCTURE SERVICES COMMITTEE MEETING

AGENDA
26 APRIL 2021

FINAL CERTIFICATE OF ANALYSIS

COA N°:	572318-0
COA Date:	29/03/2021
Page	1 / 1
Customer: Garden Route District Municipality - GRJ	
Order N°:	00031914
Client Reference N°:	K 01051
Project N°:	GRJ 21-002470
	
Analysed By Swift Slikker (Pty) Ltd t/a Merieux NutriSciences 4 Pearl Street, Tamsui Industrial, George, Western Cape, South Africa	
Phone: +27448730855 Fax: +27448730543 E-mail: za.customercare@mxns.com	
Received from Garden Route District Municipality - GRJ P.O. Box 12, George, 6530, Western Cape	
E-mail: linden@gardenroute.gov.za	



To: Garden Route District Municipality - GRJ
Mr. Linden Herwels
P.O. Box 12 George
6530
Western Cape

SAMPLE DESCRIPTION

Lab Sample Ref #: GRJ 21-002470-001 Sample N°: 3672018 Test Date: 25/03/2021
Category Detail: Water Sample Condition: SEALED Date Received: 25/03/2021
Product Description*: Tanker water BM212WGP
Client Sample N°**: K 1051
COA Remark** Date: 25/03/2021, Time: 08:40, Client: BM212WGP

ANALYTICAL RESULTS

Tests	Analysis Start Date	Results	Units	Limits [Target value]
<input checked="" type="checkbox"/> Coliforme METHOD: SWJM 48	25/03/2021	6	cfu/100ml	Result <= 10
<input checked="" type="checkbox"/> Escherichia coli METHOD: SWJM 45	25/03/2021	No Growth	cfu/100ml	Not Detected /100ml

Comment: Temp: 4.4°C

Results validated on 25/03/2021

Edeline Constance
Technical Signatory
Charged Date

Accredited analysis * Non-Accredited analysis NC Non Conformance ** Customer provided data / Changed Date

TMA = Total Microbial Activity / Total Viable Plate Count.
No growth = Not detected / less than the lower detection limit of the test method, for the specified sample type / volume of sample tested.
Tests marked with a tick in this report are included in the SANAS Schedule of Accreditation for this laboratory T2090.
Tests marked with * in this report are not included in the SANAS Schedule of Accreditation for this laboratory T2090.
** Data provided by the customer.
Tests marked with a plus in this report are Subcontracted Tests and are not included in the SANAS Schedule of Accreditation for this laboratory T2090.
The test report relates only to the specific item submitted for testing, it furnishes or implies no guarantee whatsoever, in respect of a similar item that has not been tested.
The test report applies to the sample as received where the laboratory has not been responsible for the sampling steps.
Options and interpretations expressed in this report are not included in the SANAS Schedule of Accreditation for this laboratory T2090.
The test report shall not be reproduced except in full without written approval of Swift Slikker (Pty) Ltd t/a Merieux NutriSciences.

INFRASTRUCTURE SERVICES COMMITTEE MEETING

AGENDA
26 APRIL 2021

FINAL CERTIFICATE OF ANALYSIS

COA N°:	599635-0
COA Date:	15/03/2021
Page:	1 of 1
Customer:	Garden Route District Municipality - GRU
Order N°:	DD031914
Client Reference N°:	K 00528
Project N°:	GRU 21-001931
	
Analysed By: Swift Silliker (Pty) Ltd via Merieux NutriSciences 4 Pearl Street, Tamou Industrial, George, Western Cape, South Africa Phone: +27448732855 Fax: +27448732943 E-mail: sa.customercare@meriex.com	
Received from: Garden Route District Municipality - GRU P.O. Box 12, George 6530, Western Cape E-mail: indon@gardenroute.gov.za	



To: Garden Route District Municipality - GRU
 Mr. Linden Herwals
 P.O. Box 12, George
 6530
 Western Cape

SAMPLE DESCRIPTION

Lab Sample Ref #: GRU 21-001931-001 Sample N°: 26482-1 Test Date: 11/03/2021
 Category Detail: Water Sample Condition: SEALED Date Received: 11/03/2021
 Product Description: Drinking water - Bahubale BTR
 Client Sample N°: K 00528
 COA Remark: Date: 08/03/2021; Time: 12:40; Client: Tarryn Soladere-BTR

ANALYTICAL RESULTS

Tests	Analysis Start Date	Result	Units	Limits (Target value)
<input type="checkbox"/> Coliforms METHOD: SWJM 48	11/03/2021	No Growth	cfu/100ml	Result <= 10
<input type="checkbox"/> Escherichia coli METHOD: SWJM 45	11/03/2021	No Growth	cfu/100ml	Not Detected (100ml)

Comment: Temp: 3.8°C

Results validated on 15/03/2021

Frances Eagleor
 Technical Signatory
 Change Box

Accredited analysis Non Accredited analysis Not Test Certificate Customer provided data

(P)A = Total Microbiology / Total Viable Plate Count.
 No growth = No colonies were seen on any tested portion of the test media, or the test media were open to the air for a period of 30 minutes.
 Tests marked with a flag in this report are included in the SANAS Schedule of Accreditation for the Laboratory T 2020.
 Tests marked with a * in this report are not included in the SANAS Schedule of Accreditation for the Laboratory T 2020.
 * Data provided by the customer.
 Tests marked with a cross in this report are Uncontrolled Tests and are not included in the SANAS Schedule of Accreditation for the Laboratory T 2020.
 The test report includes only the results of the test performed. It does not include any other information or reports of tests or samples that were not tested.
 The test report includes only the results of the test performed. It does not include any other information or reports of tests or samples that were not tested.
 The test report does not represent a sample or a lot of material, or the opinion of Swift Silliker (Pty) Ltd or Merieux NutriSciences.

INFRASTRUCTURE SERVICES COMMITTEE MEETING

AGENDA
26 APRIL 2021



A. L. ABBOTT & ASSOCIATES (PTY) LTD
Reg. No. 1982/004379/07 Established 1964
THE WATER & WASTE WATER SPECIALISTS

No.1, Vine Park
Vine Road
7925
P.O. Box 483
WOODSTOCK, CAPE
7915
SOUTH AFRICA
Telephone: (021) 448 8340/1
After Hours: 083-3263887
E-Mail Address: info@alabbott.co.za

REVISED
21/Misc
NvB/bdm

13 April 2021

Knysna Municipality
P O Box 21
KNYSNA
6570

Attention : SHANE MOPP

Dear Sir,

RESULTS FROM GARDEN ROUTE DISTRICT MUNICIPALITY

We attach Certificates of Analysis relevant to results received from Garden Route District Municipality.

The waters all complied with SANS 241, relevant to parameters measured, except for the Total Coliform bacteria in sample marked 'Adrian Temple Man Road'. The Total Coliform only marginally exceeded the limit of above said standard of 10 cfu/100 ml. It should be noted that this is only an indicator bacteria. Resampling from this point is suggested.

The waters that complied with SANS 241 are therefore fit for human consumption, relevant to parameters measured.

It should be noted that the full SANS 241 analysis was not performed, however.

Yours faithfully,


.....
N. VAN BINSBERGEN
DIRECTOR

Directors: N. Van Binsbergen, Pr.Sci.Nat., B.Tech(Chem), Dipl.Civ.Eng, Nat.Dip.Anal.Chem, F.W.I.S.A., M.S.A.C.I. (Managing)
R.H. Van der Meulen, Pr.Sci.Nat., B.Sc.
Y. A. Davies (Financial)