



# Drinking Water Case Study

CONFERENCE CENTRE – SOUTH AFRICA

COMPILED BY AMANDA COLLING – PURESAN – MAY 2018

**Puresan BWT – The Chlorine and Bromine free Bulk  
Water Treatment care product**

**Your healthy Bulk Water Treatment product**

Putting Nature's elements to work to solve man-made issues – the natural way



## Overview:

We visited the Conference Centre and met the Operations Manager, who shared the water reports that indicated that the bore holes providing water to the complex, via the water supply network, was not fit for human and animal consumption.

A sample of the untreated water was taken for analysis. The water was declared not fit for human or animal consumption.

**Pre PURESAN BWT Test done on 13/04/18:**

### SAMPLES SUBMITTED FOR MICROBIOLOGICAL ANALYSIS

#### Results Summary:

SAMPLE ID	Coliforms MPN (/100ml)	<i>E. coli</i> MPN (/100ml)	Total Bacterial Count (cfu/ml)	Fit for Human Consumption (Yes/No)	Fit for Animal Consumption (Yes/No)	Fit for Irrigation (Yes/No)
Raw water	>200.5	13.7	N/A	NO	NO	YES

The above test result/s relates only to the item/ sample as received and indicated.

#### Essential Microbiological Criteria as per SANS 241:

Total Bacterial Count ..... Less than 1000 per ml  
 Total Coliforms ..... Less than 10 per 100ml  
 Escherichia coli ..... Absent in 100ml

#### Reference Method/s:

Total Viable Colony Count – Pour Plate Method ..... SANS 5521  
 Coliform Count – Colilert Method ..... Colilert SANS 5521  
*E. coli* Count – Colilert Method ..... Colilert SANS 5521

#### Comment:

**e.g. This water is not microbiologically fit for human and animal consumption.**

## Methodology used to remedy the poor water quality

The main water reservoir is in poor condition. The reservoir was fitted with a corrugated iron roof and there is no access to either clean out or see the inside of the reservoir. The reservoir is old, and we have no idea if it contains any dead animals, rodents, birds or organic debris, like leaves and/or soil.

The reservoir is filled from 3 boreholes, delivered into the reservoir by two water feed pipes. There is no way in which to determine the flow rate of incoming or overflow water, as an in-line flow meter cannot





be fitted due to the design of the system. unit was selected by the Conference Centre, as their preferred dosing unit. The Dosetron dosing unit was installed and a 25L of PURESAN BWT 1/24 continually dose the product at a ratio of 4 l per day. The dosages are done at 06h00; 12h00; 18h00 and 00h00 (1L x 4 times per day = total of 4L per day).

A post dosing with PURESAN BWT 1/24 water sample, was taken for analysis on 18/04/2018. The microbial analysis was done on 18 April 2018.

**Post PURESAN BWT Test done on 18/04/18:**

### SAMPLES SUBMITTED FOR MICROBIOLOGICAL ANALYSIS

#### Results Summary:

SAMPLE ID	Coliforms MPN (/100ml)	<i>E. coli</i> MPN (/100ml)	Total Bacterial Count (cfu/ml)	Fit for Human Consumption (Yes/No)	Fit for Animal Consumption (Yes/No)	Fit for Irrigation (Yes/No)
Raw water	2.0	<1	Not Tested	YES	YES	YES

The above test result/s relates only to the item/ sample as received and indicated.

#### Essential Microbiological Criteria as per SANS 241:

Total Bacterial Count ..... Less than 1000 per ml  
 Total Coliforms..... Less than 10 per 100ml  
 Escherichia coli..... Absent in 100ml

#### Reference Method/s:

Total Viable Colony Count – Pour Plate Method..... SANS 5521  
 Coliform Count – Colilert Method..... Colilert SANS 5521  
*E. coli* Count – Colilert Method..... Colilert SANS 5521

#### **Comment:**

**This water is microbiologically fit for human and animal consumption.**

### **CONCLUSION:**

**PURESAN BWT has proven that within 5 days of treatment, water initially unfit for human or animal consumption has been transformed to good quality water, fit for both human and animals.**

