



Guyana Water Inc. Summary Table for Treatment Plant Compliance with WHO Parameters

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Date of Issue: April 2018

Lab Address: 255 Da Silva St., Newtown Kitty, Georgetown

Approved by: Water Qual. Dept.

April 2018

Treatment Plant Compliance with WHO parameters

Treatment plants	Parameters								
	Regions	pH	Turbidity (NTU)	Iron (mg/l)	Aluminium (mg/l)	Apparent Colour (Hazens) - clarity	Chlorine residual (mg/l)	Tot. Coliform (colonies /100ml)	E. Coli (colonies /100ml)
WHO guidelines		6.5-8.5	<5	< 0.3	<0.2	-	0.2-0.5	Low counts (e.g 0 - 60)	0
Bartica	7 Bartica	4.27	2.95	0.07	1.70	24	0.45	1	0
Lima	2 Esseq	7.35	3.27	0.26	NA	32	0.00	1	0
Fellowship	3 WCD	6.79	0.70	0.05	NA	7	0.00	12	0
Pouderoyen	3 WCD	6.85	0.88	0.13	NA	9	0.00	1	0
Vergenoegen	3 WCD	7.36	6.19	0.78	NA	60	0.00	26	fluctuating
Covent Garden	4 EBD	6.80	3.06	0.44	NA	42	-	1	0
Eccles	4 EBD	6.45	20.07	1.96	NA	190	-	15	0
Grove	4 EBD	6.67	5.70	1.06	NA	56	-	4	0
Better Hope	4 ECD	8.21	0.43	0.02	NA	13	-	10	fluctuating
Friendship	4 ECD	6.47	25.4	1.43	NA	185	-	67	0
Mon Repos	4 ECD	8.37	0.40	0.04	NA	14	-	4	0
Central	4 GT	7.54	1.28	1.15	NA	32	0.00	14	fluctuating
Shelter Belt	4 GT	4.61	3.75	0.30	3.53	47	0.00	18	0
Sophia	4 GT	8.08	0.61	0.11	NA	4	3.00	0	0
Amelia's Ward	10 Lin	5.40	3.06	0.60	NA	48	0.05	35	0
LPC	10 Lin	4.29	7.87	0.27	5.64	93	0.51	2	0
McKenzie	10 Lin	4.28	2.32	0.15	1.75	33	1.50	1	0
West Watooka	10 Lin	4.50	3.12	0.16	1.81	46	0.36	1	0
Wisroc	10 Lin	4.25	2.19	0.40	0.85	29	0.76	16	0
Cotton Tree	5 WCB	6.61	1.08	0.22	NA	13	0.06	47	0
New Amsterdam*	6 Berbice	6.35	0.37	0.10	NA	8	0.26	11	0
Port Mourant*	6 Berbice	6.71	0.80	0.04	NA	18	1.06	5	0
Queenstown*	6 Berbice	6.85	0.39	0.06	NA	9	0.08	36	0
No. 56*	6 Berbice	6.77	0.48	0.04	NA	7	0.02	22	0



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Notes (April 2018):

- 8 out of the 24 plants (i.e. 33.33%) are fully compliant with the WHO drinking water guidelines listed above.
- The remaining 16 out of 24 plants (i.e. 66.67%) are experiencing issues with respect to meeting all of the parameters.
- All surface water plants (Bartica, Shelterbelt, L.P.C, Mckenzie, West Watooka and Wisroc) are non-compliant with pH and Aluminium. These plants have low pH values ranging between 4.25-4.61: pH optimization is needed. Aluminum values range from 0.85 to 5.64 mg/L, above the 0.2 mg/L guideline value.
- 8 plants (33.3%) are non-compliant with iron. They are the same plants that were non-compliant in March 2018 (Vergenoegen, Covent Garden, Eccles, Grove, Friendship, Central Ruimveldt, Amelia's Ward and Wisroc). Out of the eight plants seven are ground water treatment plants. The Iron removal processes need to be optimized. Friendship requires iron removal processes.
- All of the plants on the East Bank of Demerara are non-compliant with regards to iron. However, Filters are being refurbished at Covent Garden and systems are being designed for Eccles treatment process.
- It is unusual for Wisroc to have high iron values and as such needs to be monitored.
- Six (6) plants recorded zero chlorine residuals consistently for the Month of April: Lima, Fellowship, Pouderoyen, Vergenoegen, Central Ruimveldt and Shelter Belt. These plants have chlorination systems but there was unavailability of calcium hypochlorite for some of the plants.
- Three (3) plants had fluctuating microbial quality for this month. These plants are Better Hope, Vergenoegen and Central Ruimveldt. However, the fluctuating values are being addressed with urgency both by the Water Quality Department and the respective regional management.
- Samples from New Amsterdam, Queenstown, No.56 and Port Mourant treatment plants were submitted to the Central Laboratory where analysis was done. The results obtained at the Central Laboratory were merged with the results from the Berbice laboratory.
- The Pump station samples submitted in April were consistent with regards to the chemical and physical parameters. Although in some cases there were no submission of some microbiology samples, those submitted indicated good microbial quality.
- The treatment plants' distribution samples analyzed generally indicate good quality with the exception of a few isolated cases. For Eccles, there was high turbidity and iron which was consistent with the final water leaving the plant. A few distributions in Region 10 (Linden) were classified with high turbidity. The distributions for Friendship (ECD) contain high iron and consequently high turbidity which are consistent with the lack of treatment at Friendship.
- While the free chlorine residual in many distributions were either low, the Cotton Tree and Bartica WTPs were consistent with regards to chlorination.