

## TEST REPORT

Report No: QMTL/R-102835/2020

<b>CLIENT : CRYSTALLINE ENVIRONMENTAL SERVICES</b> Abu Dhabi PO Box : 131463 United Arab Emirates  <b>ATTN : MR. JASMAN PINTO</b>		Sample ID	QMTL/S-102835
		Date Received	09 May 2020
		Date(s) Tested	09 May 2020 - 11 May 2020
		Date Reported	17 May 2020
Sample Description	<b>North Site Janitor Closet</b>		
Sample Type	Water	Sampling Method	QMTL-WI-15
Client Name/Project	NP	Sampled By	QMTL Representative
Location	NYUAD	Sampling Date/Time	09.05.2020/ 2:30 PM
Sample Container	1x500ml PB	Sampling Point	Tap
Sample Receipt Temp	4°C	Sample Onsite Temp	27°C
Sample Appearance	Clear	On-site Treatment	NA
Reference	NP		

### TEST RESULTS

PARAMETERS	TEST METHODS	UNITS	GUIDELINES	RESULTS
<b>MICROBIOLOGICAL ANALYSIS</b>				
E.coli	APHA 9222 H & I (23rd Edition)	CFU/100 ml	Zero	Zero
Fecal Coliforms	APHA 9222 D (23rd Edition)	CFU/100 ml	Zero	Zero
Pseudomonas aeruginosa	APHA 9213 E (23rd Edition)	CFU/100 ml	Zero	Zero
Total Bacterial Count	APHA 9215 B (23rd Edition)	CFU/ml	10@37°C	2
Total Coliforms	APHA 9222 B (23rd Edition)	CFU/100 ml	Zero	Zero

Remarks	The sample meets RSB Water Quality Regulations (4th Edition) January 2014 requirements for potable water with respect to the above tests only.
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Keywords	CFU: Colony Forming Unit, APHA: American Public Health Association, RSB: Regulation & Supervision Bureau, NP: Not Provided, NA: Not Applicable, WI: Work Instruction.
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Test method deviation	None
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Test performed by Emp#	74 & 55
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Report prepared by Emp#	72
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The above test results are only applicable to the sample(s) referred above.

Reported By



**ANILA GEORGE**  
**LABORATORY MANAGER**



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**END OF REPORT**

## TEST REPORT

Report No: QMTL/R-102836/2020

<b>CLIENT : CRYSTALLINE ENVIRONMENTAL SERVICES</b> Abu Dhabi PO Box : 131463 United Arab Emirates  <b>ATTN : MR. JASMAN PINTO</b>	Sample ID	QMTL/S-102836	
	Date Received	09 May 2020	
	Date(s) Tested	09 May 2020 - 11 May 2020	
	Date Reported	17 May 2020	
Sample Description	North Site Water Tank		
Sample Type	Water	Sampling Method	QMTL-WI-15
Client Name/Project	NP	Sampled By	QMTL Representative
Location	NYUAD	Sampling Date/Time	09.05.2020/ 2:40 PM
Sample Container	1x500ml PB	Sampling Point	Tank
Sample Receipt Temp	4°C	Sample Onsite Temp	23°C
Sample Appearance	Clear	On-site Treatment	NA
Reference	NP		

## TEST RESULTS

PARAMETERS	TEST METHODS	UNITS	GUIDELINES	RESULTS
<b>MICROBIOLOGICAL ANALYSIS</b>				
E.coli	APHA 9222 H & I (23rd Edition)	CFU/100 ml	Zero	Zero
Fecal Coliforms	APHA 9222 D (23rd Edition)	CFU/100 ml	Zero	Zero
Pseudomonas aeruginosa	APHA 9213 E (23rd Edition)	CFU/100 ml	Zero	Zero
Total Bacterial Count	APHA 9215 B (23rd Edition)	CFU/ml	10@37°C	<1
Total Coliforms	APHA 9222 B (23rd Edition)	CFU/100 ml	Zero	Zero

Remarks	The sample meets RSB Water Quality Regulations (4th Edition) January 2014 requirements for potable water with respect to the above tests only.
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Keywords	CFU: Colony Forming Unit, APHA: American Public Health Association, RSB: Regulation & Supervision Bureau, NP: Not Provided, NA: Not Applicable, WI: Work Instruction.
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Test method deviation	None
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Test performed by Emp#	74 & 55
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Report prepared by Emp#	72
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**END OF REPORT**

## TEST REPORT

Report No: QMTL/R-102837/2020

<b>CLIENT : CRYSTALLINE ENVIRONMENTAL SERVICES</b> Abu Dhabi PO Box : 131463 United Arab Emirates		Sample ID	QMTL/S-102837
		Date Received	09 May 2020
		Date(s) Tested	09 May 2020 - 11 May 2020
<b>ATTN : MR. JASMAN PINTO</b>		Date Reported	17 May 2020
Sample Description	North Site Drinking Water Fountain (NYUAD: 00202988)		
Sample Type	Water	Sampling Method	QMTL-WI-15
Client Name/Project	NP	Sampled By	QMTL Representative
Location	NYUAD	Sampling Date/Time	09.05.2020/ 2:50 PM
Sample Container	1x500ml PB	Sampling Point	Drinking Water Fountain
Sample Receipt Temp	4°C	Sample Onsite Temp	29°C
Sample Appearance	Clear	On-site Treatment	NA
Reference	NP		

## TEST RESULTS

PARAMETERS	TEST METHODS	UNITS	GUIDELINES	RESULTS
<b>MICROBIOLOGICAL ANALYSIS</b>				
E.coli	APHA 9222 H & I (23rd Edition)	CFU/100 ml	Zero	Zero
Fecal Coliforms	APHA 9222 D (23rd Edition)	CFU/100 ml	Zero	Zero
Pseudomonas aeruginosa	APHA 9213 E (23rd Edition)	CFU/100 ml	Zero	Zero
Total Coliforms	APHA 9222 B (23rd Edition)	CFU/100 ml	Zero	Zero
Total Bacterial Count	APHA 9215 B (23rd Edition)	CFU/ml	10@37°C	7

Remarks	The sample meets RSB Water Quality Regulations (4th Edition) January 2014 requirements for potable water with respect to the above tests only.
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Keywords	CFU: Colony Forming Unit, APHA: American Public Health Association, RSB: Regulation & Supervision Bureau, NP: Not Provided, NA: Not Applicable, WI: Work Instruction.
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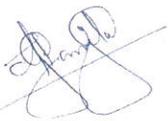
Test method deviation	None
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Test performed by Emp#	74 & 55
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Report prepared by Emp#	72
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**END OF REPORT**

## TEST REPORT

Report No: QMTL/R-102838/2020

<b>CLIENT : CRYSTALLINE ENVIRONMENTAL SERVICES</b> Abu Dhabi PO Box : 131463 United Arab Emirates		Sample ID	QMTL/S-102838
		Date Received	09 May 2020
		Date(s) Tested	09 May 2020 - 11 May 2020
<b>ATTN : MR. JASMAN PINTO</b>		Date Reported	17 May 2020
Sample Description	<b>North Site Irrigation Water Tank</b>		
Sample Type	Water	Sampling Method	QMTL-WI-15
Client Name/Project	NP	Sampled By	QMTL Representative
Location	NYUAD	Sampling Date/Time	09.05.2020/ 3:00 PM
Sample Container	1x500ml PB	Sampling Point	Tank
Sample Receipt Temp	4°C	Sample Onsite Temp	30.5°C
Sample Appearance	Clear	On-site Treatment	NA
Reference	NP		

## TEST RESULTS

PARAMETERS	TEST METHODS	UNITS	GUIDELINES	RESULTS
<b>MICROBIOLOGICAL ANALYSIS</b>				
E.coli	APHA 9222 H & I (23rd Edition)	CFU/100 ml	23	Zero
Fecal Coliforms	APHA 9222 D (23rd Edition)	CFU/100 ml	23	Zero
Pseudomonas aeruginosa	APHA 9213 E (23rd Edition)	CFU/100 ml	-	Zero
Total Coliforms	APHA 9222 B (23rd Edition)	CFU/100 ml	-	Zero
Total Bacterial Count	APHA 9215 B (23rd Edition)	CFU/ml	-	120

Remarks	The sample meets RSB Recycled Water and Biosolids Regulations 2018 requirements for irrigation water with respect to the above tests only.
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Keywords	CFU: Colony Forming Unit, APHA: American Public Health Association, RSB: Regulation & Supervision Bureau, NP: Not Provided, NA: Not Applicable, WI: Work Instruction.
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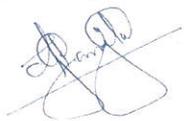
Test method deviation	None
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Test performed by Emp#	74 & 55
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Report prepared by Emp#	72
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The above test results are only applicable to the sample(s) referred above.

Reported By



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**END OF REPORT**

## CONSULTING SERVICE REPORT

<b>CUSTOMER: SERCO - NEW YORK UNIVERSITY, ABU DHABI</b>	<b>To: Mr. Ratheesh Muttath Operations Engineer</b>	<b>DATE: 09-05-2020</b>
<b>CUSTOMER ID: 3003</b>	<b>Copy: SERCO - NYUAD</b>	<b>LAST VISIT: 12-04-2020</b>

### AMBIENT WATER ANALYSIS

PARAMETER	CONTROL LIMITS	North Side Water Tank			
pH at 25°C	7.0 - 9.2	8.45			
Conductivity at 25°C, µs/cm	1600 Max.	278			
Total Dissolved Solids (TDS)	1000 Max.	182			
Total Hardness, ppm as CaCO <sub>3</sub>	300 Max.	75			
Calcium Hardness, ppm as CaCO <sub>3</sub>	200 Max.	71			
Total Alkalinity	--	61			
Chloride, ppm as Cl <sup>-</sup>	250 Max.	58			
Iron, ppm as Fe	0.2 Max.	<0.12			
Sulphate (SO <sub>4</sub> ), mg/l	250 Max.	<15			
Copper (Cu), mg/l	1 Max.	<0.07			
Aluminum (Al), mg/l	0.2 Max.	<0.06			
Zinc (Zn), mg/l	5 Max.	<0.16			
Nitrate (NO <sub>3</sub> <sup>-</sup> ), mg/l	50 Max.	<1.0			
Nitrite (NO <sub>2</sub> <sup>-</sup> ), mg/l	30 Max.	<0.09			
Fluorides (F), mg/l	15 Max.	<0.01			
Potassium (K), mg/l	12 Max.	<5.0			

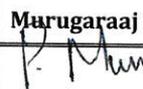
#### Treatment Residuals

Odor	Unobjectionable	ND			
Free Residual Chlorine as Cl	0.2 - 0.5	0.42			
Turbidity in NTU	4.0 Max	<1.0			

All test results expressed in parts per million (ppm) as CaCO<sub>3</sub> except pH and conductivity (µmhos).

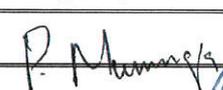
COMMENTS:	ACTION:
The pH and Conductivity/TDS are found satisfactory. ⇨	No action recommended.
Dissolved iron levels are within control limits. ⇨	No action recommended.
Chlorine levels found satisfactory. ⇨	No action recommended.

**The dosing system is calibrated. Dosing pumps, low level sensor, dosing tubes are in good condition. There is no recirculation line/system for the water tank. Please check chlorine levels daily. Kindly inform Crystalline if levels fluctuate.**

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal SHC			--	
Service Engineer:	<b>Murugaraaj</b>		Client:	Mr. Ratheesh Muttath
Signature:			Signature:	



## CONSULTING SERVICE REPORT

<b>CUSTOMER: SERCO – NEW YORK UNIVERSITY, ABU DHABI</b>		<b>To: Mr. Ratheesh Muttath Operations Engineer</b>		<b>DATE: 09-05-2020</b>	
<b>CUSTOMER ID: 3003</b>		<b>Copy: SERCO – NYUAD</b>		<b>LAST VISIT: 12-04-2020</b>	
<b>AMBIENT WATER ANALYSIS</b>					
PARAMETER	CONTROL LIMITS	North Side Janitor Closed			
pH at 25°C	7.0 – 9.2	8.41			
Conductivity at 25°C, µs/cm	1600 Max.	269			
Total Dissolved Solids (TDS)	1000 Max.	174			
Total Hardness, ppm as CaCO <sub>3</sub>	300 Max.	73			
Calcium Hardness, ppm as CaCO <sub>3</sub>	200 Max.	66			
Total Alkalinity	--	57			
Chloride, ppm as Cl <sup>-</sup>	250 Max.	61			
Iron, ppm as Fe	0.2 Max.	<0.11			
Sulphate (SO <sub>4</sub> ), mg/l	250 Max.	<10			
Copper (Cu), mg/l	1 Max.	<0.08			
Aluminum (Al), mg/l	0.2 Max.	<0.06			
Zinc (Zn), mg/l	5 Max.	<0.19			
Nitrate (NO <sub>3</sub> <sup>-</sup> ), mg/l	50 Max.	<1.0			
Nitrite (NO <sub>2</sub> <sup>-</sup> ), mg/l	30 Max.	<0.06			
Fluorides (F), mg/l	15 Max.	<0.05			
Potassium (K), mg/l	12 Max.	<5.0			
<b>Treatment Residuals</b>					
Odor	Unobjectionable	ND			
Free Residual Chlorine as Cl	0.2 – 0.5	0.39			
Turbidity in NTU	4.0 Max	<1.0			
<i>All test results expressed in parts per million (ppm) as CaCO<sub>3</sub> except pH and conductivity (µmhos).</i>					
<b>COMMENTS:</b>			<b>ACTION:</b>		
The pH and Conductivity/TDS are found satisfactory. ⇨			No action recommended.		
Dissolved iron levels are within control limits. ⇨			No action recommended.		
Chlorine levels found satisfactory. ⇨			No action recommended.		
<b>INVENTORY LEVELS</b>					
<b>Chemical</b>			<b>DOSAGE SCHEDULE</b>		
<b>Quantity</b>	<b>Chemical</b>	<b>Present Dosage</b>	<b>Revised Dosage</b>		
Crystal SHC		--			
<b>Service Engineer:</b>	Murugaraaj	<b>Client:</b>	Mr. Ratheesh Muttath		
<b>Signature:</b>		<b>Signature:</b>			

