

**TEST REPORT**

REPORT NO:-QMTL/R-82967

<b>CLIENT: CRYSTALLINE ENVIRONMENTAL SERVICES</b>		
P.O.Box.131463, Abu Dhabi, U.A.E		
Ph:02-6508930/0557167017		
<b>ATTN:MR. JASMAN PINTO</b>		
Product: Water	Sampling Method: APHA 9060 A	Sample ID: QMTL/S-82967
Reference: NYUAD	Sampled By: QMTL Representative	Date Received: 07.12.2019
<b>Sample Description :</b> Irrigation Tank Sample Onsite Temp: 27.9°C Sample Receipt Temp: 4°C	Source: Valve	Date(s) Tested: 07-09.12.2019
	Sample Container: 1X 500 ml PB	Date Reported: 12.12.2019
	Sample Appearance: Clear	Date of Sampling/Time: 07.12.2019/01.35 PM
On-Site Treatment: NA	Tested by Emp#: 55&74	Location: AUH

**TEST RESULTS**

PARAMETERS	TEST METHOD (APHA 23 <sup>RD</sup> EDITION)	UNITS	SPECIFICATION	RESULTS
<b>MICROBIOLOGICAL ANALYSIS</b>				
Total Bacterial Count	APHA 9215 B	CFU/ml	-	<b>240</b>
Total Coliforms	APHA 9222 B	CFU/100ml	-	<b>Zero</b>
Faecal coliform	APHA 9222 D	CFU/100ml	23	<b>Zero</b>
Pseudomonas aeruginosa	APHA 9213 E	CFU/100ml	-	<b>Zero</b>
Escherichia coli	APHA 9222 H & I	CFU/100ml	23	<b>Zero</b>

REMARKS:The sample meets RSB Recycled Water and Biosolids Regulations 2018(Second Edition) requirements for irrigation water with respect to the above tests only.

Key Words:- CFU: Colony Forming Unit, APHA: American Public Health Association, RSB: Regulation & Supervision Bureau, NA: Not Applicable

Report prepared by Emp#: 75

Test Method deviation : None

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- 82996

<b>CLIENT:- CRYSTALLINE ENVIRONMENTAL SERVICES</b>		
P.O.Box.131463, Abu Dhabi, U.A.E Ph:02-6508930/0557167017		
<b>ATTN:MR. JASMAN PINTO</b>		
Product: Water	Sampling Method: BS 7592	Sample ID: QMTL/S-82996
Reference: NYUAD	Sampled By: QMTL Representative	Date Received: 07.12.2019
<b>Sample Description :</b> Irrigation Tank Sample Onsite Temp: 27.9°C Sample Receipt Temp: 16°C	Source: Valve	Date(s) Tested: 07-17.12.2019
	Sample Container: 1x1 L PB	Date Reported: 17.12.2019
	Sample Appearance: Clear	Date of Sampling/Time: 07.12.2019/01.35 PM
On-Site Treatment: NA	Tested by Emp#: 55 & 74	Location: AUH

**TEST RESULTS**

PARAMETER	TEST METHOD	UNIT	LIMIT	RESULT
<b>LEGIONELLA ANALYSIS</b>				
Legionella	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	cfu/litre	100 (cfu/ml) (circulating water)	<b>Not Detected</b>
<b>IDENTIFICATION</b>				
Legionella Species	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	-	-	<b>Absent</b>
Legionella pneumophila sero group 1	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	-	-	<b>Absent</b>
Legionella pneumophila sero group 2-15	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	-	-	<b>Absent</b>

REMARKS: The sample meets RSB Recycled Water and Biosolids Regulations 2018 requirements for irrigation water with respect to the above tests only.

Key Words: CFU: Colony Forming Unit, BS: British Standards, CCFRA: Campden & Chorleywood Food Research Association., RSB: Regulation & Supervision Bureau, NA: Not Applicable

Report prepared by Emp#: 75

Test Method deviation : None

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- 83635

**CLIENT:- CRYSTALLINE ENVIRONMENTAL SERVICES**

P.O.Box.131463, Abu Dhabi, U.A.E

Ph:02-6508930/0557167017

**ATTN:MR. JASMAN PINTO**

Product: Water	Sampling Method: APHA 9060 A	Sample ID: QMTL/S-83635
Reference: NYUAD	Sampled By: QMTL Representative	Date Received: 10.12.2019
Sample Description : Central Fountain Sample Onsite Temp: 23.9°C Sample Receipt Temp: 4°C	Source: Fountain	Date(s) Tested: 10-12.12.2019
	Sample Container: 1X 500ml PB	Date Reported: 18.12.2019
	Sample Appearance: Clear	Date of Sampling/Time: 10.12.2019/09.24 AM
On-Site Treatment: NA	Tested by Emp#: 55 & 74	Location: AUH

**TEST RESULTS**

PARAMETERS	TEST METHODS (APHA 23 <sup>RD</sup> EDITION)	UNITS	SPECIFICATIONS	RESULTS
<b>MICROBIOLOGICAL ANALYSIS</b>				
Total Bacterial Count	APHA 9215 B	CFU/ml	500	<b>2</b>
Total Coliforms	APHA 9222 B	CFU/100ml	-	<b>Zero</b>
Faecal coliform	APHA 9222 D	CFU/100ml	-	<b>Zero</b>
Pseudomonas aeruginosa	APHA 9213 E	CFU/100ml	-	<b>Zero</b>
Escherichia coli	APHA 9222 H & I	CFU/100ml	-	<b>Zero</b>

REMARKS: The sample meets DM Water Systems quality specifications for fountain water with respect to the above test only.

Key Words:- CFU: Colony Forming Unit, APHA: American Public Health Association, DM: Dubai Municipality, RSB: Regulation & Supervision Bureau, NA: Not Applicable

Report prepared by Emp#: 75

Test Method deviation : None

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- 83668

<b>CLIENT:- CRYSTALLINE ENVIRONMENTAL SERVICES</b>		
P.O.Box.131463, Abu Dhabi, U.A.E Ph:02-6508930/0557167017		
<b>ATTN: Mr. JASMAN PINTO</b>		
Product: Water	Sampling Method: BS 7592	Sample ID: QMTL/S-83668
Reference: NYUAD	Sampled By: QMTL Representative	Date Received: 10.12.2019
<b>Sample Description :</b> Central Fountain	Source: Fountain	Date(s) Tested: 10-20.12.2019
	Sample Container: 1x1 L PB	Date Reported: 23.12.2019
Sample Onsite Temp: 23.9°C	Sample Appearance: Clear	Date of Sampling/Time:
Sample Receipt Temp: 16°C		10.12.2019/09.24 AM
On-Site Treatment: NA	Tested by Emp#: 55 & 74	Location: AUH

**TEST RESULTS**

PARAMETERS	TEST METHODS	UNITS	LIMITS	RESULTS
<b>LEGIONELLA ANALYSIS</b>				
Legionella	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	cfu/litre	<1	<b>Not Detected</b>
<b>IDENTIFICATION</b>				
Legionella Species	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	-	-	<b>Absent</b>
Legionella pnemophila sero group 1	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	-	-	<b>Absent</b>
Legionella pnemophila sero group 2-15	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	-	-	<b>Absent</b>

REMARKS : The sample meets DM Water System quality (2010) specifications for Water Fountain with respect to the above tests only.

Key Words: CFU: Colony Forming Unit, BS: British Standards, CCFRA: Campden & Chorleywood Food Research Association, DM: Dubai Municipality, NA: Not Applicable

Report prepared by Emp#: 61

Test Method deviation : None

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**

## CONSULTING SERVICE REPORT

<b>CUSTOMER: SERCO - NEW YORK UNIVERSITY, ABU DHABI</b>	<b>To: Mr. Ratheesh Muttath Operations Engineer</b>	<b>DATE: 07-12-2019</b>
<b>CUSTOMER ID: 3003</b>	<b>Copy: SERCO - NYUAD</b>	<b>LAST VISIT: 10-11-2019</b>

### KIDS SPLASH PAD WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CENTER FOUNTAIN			
pH	7.2 - 7.6	7.57			
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	367			
TDS, ppm	Max 1000	238			
'P' Alkalinity, ppm as $\text{CaCO}_3$	80 - 120	--			
Total Hardness, ppm as $\text{CaCO}_3$					
Calcium Hardness, ppm as $\text{CaCO}_3$	100 - 500	--			
Chloride, ppm as $\text{Cl}^-$	--				
Iron, ppm as Fe					
<b>Treatment Residuals</b>					
Silica, ppm					
CaH Balance					
Dipslide	<10 <sup>3</sup>	ND			
Salinity in mg/l	--				
Free Residual Chlorine as Cl	1.0 - 2.0	1.03			
Cynauric Acid	20 - 60	--			

All test results expressed in parts per million (ppm) as  $\text{CaCO}_3$  except pH and conductivity ( $\mu\text{mhos}$ ).

COMMENTS:	ACTION:
The pH levels found are satisfactory $\Rightarrow$	No action recommended
Chlorine levels are found satisfactory $\Rightarrow$	No action recommended

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Salt Granules			--	
Pool Acid			--	
Crystal Care			--	
Crystal Clear				
Calcium Chloride				
Soda Ash				
Service Engineer:	Murugaraaj		Client:	Mr. Ratheesh Muttath
Signature:			Signature:	



**TEST REPORT**

REPORT NO:-QMTL/R-83426

<b>CLIENT: CRYSTALLINE ENVIRONMENTAL SERVICES</b> P.O.Box.131463, Abu Dhabi, U.A.E Ph:02-6508930/0557167017		
<b>ATTN:MR. JASMAN PINTO</b>		
Product: Water	Sampling Method: APHA 9060 A	Sample ID: QMTL/S-83426
Reference: NYUAD	Sampled By: QMTL Representative	Date Received: 09.12.2019
<b>Sample Description :</b> Kids Splash Pad Sample Onsite Temp: 24°C Sample Receipt Temp: 4°C	Source: Tank	Date(s) Tested: 09-11.12.2019
	Sample Container: 1X 500 ml PB	Date Reported: 14.12.2019
	Sample Appearance: Clear	Date of Sampling/Time: 09.12.2019/01.22 PM
On-Site Treatment: NA	Tested by Emp#: 55&74	Location: AUH

**TEST RESULTS**

PARAMETERS	TEST METHODS (APHA 23 <sup>RD</sup> EDITION)	UNITS	SPECIFICATIONS	RESULTS
<b>MICROBIOLOGICAL ANALYSIS</b>				
Total Bacterial Count	APHA 9215 B	CFU/ml	1000	<1
Total Coliforms	APHA 9222 B	CFU/100ml	Zero	<b>Zero</b>
Faecal coliform	APHA 9222 D	CFU/100ml	Zero	<b>Zero</b>
Pseudomonas aeruginosa	APHA 9213 E	CFU/100ml	Zero	<b>Zero</b>
Escherichia coli	APHA 9222 H & I	CFU/100ml	Zero	<b>Zero</b>

REMARKS: The sample meets DM Water Systems quality (2010) specifications for Pool Water with respect to the above tests only.

Key Words:- CFU: Colony Forming Unit, APHA: American Public Health Association, DM: Dubai Municipality, NA: Not Applicable

Report prepared by Emp#: 75

Test Method deviation : None

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-83434

<b>CLIENT: CRYSTALLINE ENVIRONMENTAL SERVICES</b>		
P.O.Box.131463, Abu Dhabi, U.A.E Ph:02-6508930/0557167017		
<b>ATTN: Mr. JASMAN PINTO</b>		
Product: Water	Sampling Method: BS 7592	Sample ID: QMTL/S-83434
Reference: NYUAD	Sampled By: QMTL Representative	Date Received: 09.12.2019
<b>Sample Description:</b> Kids Splash Pad	Source: Tank	Date(s) Tested: 09-19.12.2019
	Sample Container: 1x1 L PB	Date Reported: 23.12.2019
Sample Onsite Temp: 24°C	Sample Appearance: Clear	Date of Sampling/Time: 09.12.2019/01.22 PM
Sample Receipt Temp: 16°C		
On-Site Treatment: NA	Tested by Emp#: 55&74	Location: AUH

### TEST RESULTS

PARAMETERS	TEST METHODS	UNITS	LIMITS	RESULTS
<b>LEGIONELLA ANALYSIS</b>				
Legionella	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	cfu/litre	<1	<b>Not Detected</b>
<b>IDENTIFICATION</b>				
Legionella Species	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	-	-	<b>Absent</b>
Legionella pneumophila sero group 1	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	-	-	<b>Absent</b>
Legionella pneumophila sero group 2-15	CCFRA 3.9.1 (5 <sup>th</sup> Edition)	-	-	<b>Absent</b>

REMARKS : The sample meets DM Water System quality (2010) specifications for Pool Water with respect to the above tests only.

Key Words: CFU: Colony Forming Unit, BS: British Standards, CCFRA: Campden & Chorleywood Food Research Association, DM: Dubai Municipality, NA: Not Applicable

Report prepared by Emp#: 61

Test Method deviation : None

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Reported By

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## CONSULTING SERVICE REPORT

<b>CUSTOMER: SERCO - NEW YORK UNIVERSITY, ABU DHABI</b>	<b>To: Mr. Ratheesh Muttath Operations Engineer</b>	<b>DATE: 07-12-2019</b>
<b>CUSTOMER ID: 3003</b>	<b>Copy: SERCO - NYUAD</b>	<b>LAST VISIT: 10-11-2019</b>

### KIDS SPLASH PAD WATER ANALYSIS

PARAMETER	CONTROL LIMITS	KIDS SPLASH PAD			
pH	7.2 - 7.6	7.53			
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	312			
TDS, ppm	Max 1000	204			
'P' Alkalinity, ppm as $\text{CaCO}_3$	80 - 120	--			
Total Hardness, ppm as $\text{CaCO}_3$					
Calcium Hardness, ppm as $\text{CaCO}_3$	100 - 500	--			
Chloride, ppm as $\text{Cl}^-$	--				
Iron, ppm as Fe					

#### Treatment Residuals

Silica, ppm					
CaH Balance					
Dipslide	<10 <sup>3</sup>	ND			
Salinity in mg/l	--				
Free Residual Chlorine as Cl	1.0 - 2.0	1.03			
Cynauric Acid	20 - 60	--			

All test results expressed in parts per million (ppm) as  $\text{CaCO}_3$  except pH and conductivity ( $\mu\text{mhos}$ ).

#### COMMENTS:

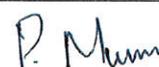
#### ACTION:

The pH levels found are satisfactory.	⇒	No action Recommended,
Chlorine levels are found satisfactory	⇒	No action recommended

**Kindly maintain the chlorine levels in the splash pad. Kindly install an automatic dosing system for the splash pad. Fresh water inlet for the splash pad is missing. The tank supplying water to the splash pad must be cleaned every month.**

#### INVENTORY LEVELS

#### DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Salt Granules			--	
Pool Acid			--	
Crystal Care			--	
Crystal Clear				
Calcium Chloride				
Soda Ash				
Service Engineer:	Murugaraaj	Client:	Mr. Ratheesh Muttath	
Signature:		Signature:		

