

TEST REPORT

Report No: QMTL/R-92617/2020

CLIENT : CRYSTALLINE ENVIRONMENTAL SERVICES Abu Dhabi PO Box : 131463 United Arab Emirates	Sample ID	QMTL/S-92617	
	Date Received	08 Feb 2020	
	Date(s) Tested	08 Feb 2020 - 10 Feb 2020	
	Date Reported	24 Feb 2020	
ATTN : MR. JASMAN PINTO			
Sample Description	Irrigation Tank		
Sample Type	Water	Sampling Method	QMTL-WI-15
Client Name/Project	NP	Sampled By	QMTL Representative
Location	AUH	Sampling Date/Time	08.02.2020/1:00PM
Sample Container	1x500mL PB	Sampling Point	Tank
Sample Receipt Temp	4°C	Sample Onsite Temp	28.2°C
Sample Appearance	Clear	On-site Treatment	NA
Reference	NYUAD		

TEST RESULTS

PARAMETERS	TEST METHODS	UNITS	GUIDELINES	RESULTS
MICROBIOLOGICAL ANALYSIS				
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 Bacterial Count	APHA 9215 B (23rd Edition)	CFU/ml	-	180
Total Coliforms	APHA 9222 B (23rd Edition)	CFU/100 ml	-	Zero
Remarks	The sample meets RSB Recycled Water and Biosolids Regulations 2018 requirements for irrigation water with respect to the above tests only.			

Keywords	CFU: Colony Forming Unit, APHA: American Public Health Association, RSB: Regulation & Supervision Bureau, NA: Not Applicable, NP: Not Provided
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Test method deviation	None
Test performed by Emp#	74 & 55
Report prepared by Emp#	22
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-92886/2020

CLIENT : CRYSTALLINE ENVIRONMENTAL SERVICES Abu Dhabi PO Box : 131463 United Arab Emirates	Sample ID	QMTL/S-92886	
	Date Received	10 Feb 2020	
	Date(s) Tested	10 Feb 2020 - 12 Feb 2020	
	Date Reported	20 Feb 2020	
ATTN : MR. JASMAN PINTO			
Sample Description	Kids Splash Pad		
Sample Type	Water	Sampling Method	QMTL-WI-15
Client Name/Project	NP	Sampled By	QMTL Representative
Location	AUH	Sampling Date/Time	10.02.2020/2:00 PM
Sample Container	1x500mL PB	Sampling Point	Tank
Sample Receipt Temp	4°C	Sample Onsite Temp	27°C
Sample Appearance	Clear	On-site Treatment	NP
Reference	NYUAD		

TEST RESULTS

PARAMETERS	TEST METHODS	UNITS	GUIDELINES	RESULTS
MICROBIOLOGICAL ANALYSIS				
E.coli	APHA 9222 H & I (23rd Edition)	CFU/100 ml	-	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	1000	8
Total Coliforms	APHA 9222 B (23rd Edition)	CFU/100 ml	Zero	Zero
Remarks	The sample meets DM Water Systems quality (2010) specifications for Pool Water with respect to the above tests only.			

Keywords	CFU: Colony Forming Unit, APHA: American Public Health Association, DM: Dubai Municipality, NP: Not Provided, NA: Not Applicable
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Test method deviation	None
Test performed by Emp#	78 & 74 & 55
Report prepared by Emp#	22
The above test results are only applicable to the sample(s) referred above.	

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END OF REPORT

TEST REPORT

Report No: QMTL/R-92624/2020

CLIENT : CRYSTALLINE ENVIRONMENTAL SERVICES Abu Dhabi PO Box : 131463 United Arab Emirates	Sample ID	QMTL/S-92624	
	Date Received	08 Feb 2020	
	Date(s) Tested	08 Feb 2020 - 10 Feb 2020	
	Date Reported	24 Feb 2020	
ATTN : MR. JASMAN PINTO			
Sample Description	Center Water Fountain		
Sample Type	Water	Sampling Method	QMTL-WI-15
Client Name/Project	NP	Sampled By	QMTL Representative
Location	AUH	Sampling Date/Time	08.02.2020/2:30PM
Sample Container	1x500mL PB	Sampling Point	Water Fountain
Sample Receipt Temp	4°C	Sample Onsite Temp	20.7°C
Sample Appearance	Clear	On-site Treatment	NA
Reference	NYUAD		

TEST RESULTS

PARAMETERS	TEST METHODS	UNITS	GUIDELINES	RESULTS
MICROBIOLOGICAL ANALYSIS				
E.coli	APHA 9222 H & I (23rd Edition)	CFU/100 ml	-	Zero
Fecal Coliforms	APHA 9222 D (23rd Edition)	CFU/100 ml	-	Zero
Pseudomonas aeruginosa	APHA 9213 E (23rd Edition)	CFU/100 ml	-	Zero
Total Bacterial Count	APHA 9215 B (23rd Edition)	CFU/ml	500	240
Total Coliforms	APHA 9222 B (23rd Edition)	CFU/100 ml	-	Zero
Remarks	The sample meets DM Water Systems quality (2010) specifications for water feature with respect to the above tests only.			

Keywords	CFU: Colony Forming Unit, APHA: American Public Health Association, DM: Dubai Municipality, NA : Not Applicable ; NP: Not Provided
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Test method deviation	None
Test performed by Emp#	74 & 55
Report prepared by Emp#	22

The above test results are only applicable to the sample(s) referred above.

Reported By



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END OF REPORT

TEST REPORT

Report No: QMTL/R-92623/2020

CLIENT : CRYSTALLINE ENVIRONMENTAL SERVICES Abu Dhabi PO Box : 131463 United Arab Emirates ATTN : MR. JASMAN PINTO	Sample ID	QMTL/S-92623	
	Date Received	08 Feb 2020	
	Date(s) Tested	08 Feb 2020 - 10 Feb 2020	
	Date Reported	24 Feb 2020	
Sample Description	East Water Feature		
Sample Type	Water	Sampling Method	QMTL-WI-15
Client Name/Project	NP	Sampled By	QMTL Representative
Location	AUH	Sampling Date/Time	08.02.2020/2:20PM
Sample Container	1x500mL.PB	Sampling Point	Fountain
Sample Receipt Temp	4°C	Sample Onsite Temp	20.3°C
Sample Appearance	Clear	On-site Treatment	NA
Reference	NYUAD		

TEST RESULTS

PARAMETERS	TEST METHODS	UNITS	GUIDELINES	RESULTS
MICROBIOLOGICAL ANALYSIS				
E.coli	APHA 9222 H & I (23rd Edition)	CFU/100 ml	-	Zero
Fecal Coliforms	APHA 9222 D (23rd Edition)	CFU/100 ml	-	Zero
Pseudomonas aeruginosa	APHA 9213 E (23rd Edition)	CFU/100 ml	-	Zero
Total Bacterial Count	APHA 9215 B (23rd Edition)	CFU/ml	500	<1
Total Coliforms	APHA 9222 B (23rd Edition)	CFU/100 ml	-	Zero
Remarks	The sample meets DM Water Systems quality (2010) specifications for water feature with respect to the above tests only.			

Keywords	CFU: Colony Forming Unit, APHA: American Public Health Association, DM: Dubai Municipality, NA : Not Applicable ; NP: Not Provided
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Test method deviation	None
Test performed by Emp#	74 & 55
Report prepared by Emp#	22
The above test results are only applicable to the sample(s) referred above.	

Reported By



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END OF REPORT

TEST REPORT

Report No: QMTL/R-92625/2020

CLIENT : CRYSTALLINE ENVIRONMENTAL SERVICES Abu Dhabi PO Box : 131463 United Arab Emirates	Sample ID	QMTL/S-92625	
	Date Received	08 Feb 2020	
	Date(s) Tested	08 Feb 2020 - 10 Feb 2020	
	Date Reported	24 Feb 2020	
ATTN : MR. JASMAN PINTO			
Sample Description	West Water Feature		
Sample Type	Water	Sampling Method	QMTL-WI-15
Client Name/Project	NP	Sampled By	QMTL Representative
Location	AUH	Sampling Date/Time	08.02.2020/2:45PM
Sample Container	1x500mL PB	Sampling Point	Water Fountain
Sample Receipt Temp	4°C	Sample Onsite Temp	21.8°C
Sample Appearance	Clear	On-site Treatment	NA
Reference	NYUAD		

TEST RESULTS

PARAMETERS	TEST METHODS	UNITS	GUIDELINES	RESULTS
MICROBIOLOGICAL ANALYSIS				
E.coli	APHA 9222 H & I (23rd Edition)	CFU/100 ml	-	Zero
Fecal Coliforms	APHA 9222 D (23rd Edition)	CFU/100 ml	-	Zero
Pseudomonas aeruginosa	APHA 9213 E (23rd Edition)	CFU/100 ml	-	Zero
Total Bacterial Count	APHA 9215 B (23rd Edition)	CFU/ml	500	180
Total Coliforms	APHA 9222 B (23rd Edition)	CFU/100 ml	-	Zero
Remarks	The sample meets DM Water Systems quality (2010) specifications for water feature with respect to the above tests only.			

Keywords	CFU: Colony Forming Unit, APHA: American Public Health Association, DM: Dubai Municipality, NA : Not Applicable ; NP: Not Provided
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Test method deviation	None
Test performed by Emp#	74 & 55
Report prepared by Emp#	22
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

CUSTOMER: SERCO – NEW YORK UNIVERSITY, ABU DHABI	To: Mr. Ratheesh Muttath Operations Engineer	DATE: 08-02-2020
CUSTOMER ID: 3003	Copy: SERCO - NYUAD	LAST VISIT: 04-01-2020

KIDS SPLASH PAD WATER ANALYSIS

PARAMETER	CONTROL LIMITS	CENTER FOUNTAIN			
pH	7.2 – 7.6	7.58			
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	369			
TDS, ppm	Max 1000	239			
'P' Alkalinity, ppm as CaCO_3	80 - 120	--			
Total Hardness, ppm as CaCO_3					
Calcium Hardness, ppm as CaCO_3	100 - 500	--			
Chloride, ppm as Cl^-	--				
Iron, ppm as Fe					

Treatment Residuals					
Silica, ppm					
CaH Balance					
Dipslide	<10 ³	ND			
Salinity in mg/l	--				
Free Residual Chlorine as Cl	1.0 – 2.0	1.02			
Cynauric Acid	20 - 60	--			

*** All test results expressed in parts per million (ppm) as CaCO_3 except pH and conductivity (μmhos).

COMMENTS:	ACTION:
The pH levels found are satisfactory ⇒	No action recommended
Chlorine levels are found satisfactory ⇒	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:		



CONSULTING SERVICE REPORT

CUSTOMER: SERCO - NEW YORK UNIVERSITY, ABU DHABI	To: Mr. Ratheesh Muttath Operations Engineer	DATE: 08-02-2020
CUSTOMER ID: 3003	Copy: SERCO - NYUAD	LAST VISIT: 04-01-2020

KIDS SPLASH PAD WATER ANALYSIS

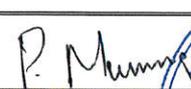
PARAMETER	CONTROL LIMITS	EAST FOUNTAIN			
pH	7.2 - 7.6	7.47			
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	417			
TDS, ppm	Max 1000	271			
'P' Alkalinity, ppm as CaCO_3	80 - 120	--			
Total Hardness, ppm as CaCO_3					
Calcium Hardness, ppm as CaCO_3	100 - 500	--			
Chloride, ppm as Cl^-	--				
Iron, ppm as Fe					

Treatment Residuals

Silica, ppm					
CaH Balance					
Dipslide	<10 ³	ND			
Salinity in mg/l	--				
Free Residual Chlorine as Cl	1.0 - 2.0	1.13			
Cynauric Acid	20 - 60	--			

*** All test results expressed in parts per million (ppm) as CaCO_3 except pH and conductivity (μmhos).

COMMENTS:	ACTION:
The pH levels found are satisfactory ⇒	No action recommended
Chlorine levels are found satisfactory ⇒	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:	



CONSULTING SERVICE REPORT

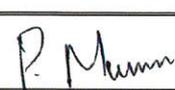
CUSTOMER: SERCO - NEW YORK UNIVERSITY, ABU DHABI	To: Mr. Ratheesh Muttath Operations Engineer	DATE: 08-02-2020
CUSTOMER ID: 3003	Copy: SERCO - NYUAD	LAST VISIT: 04-01-2020

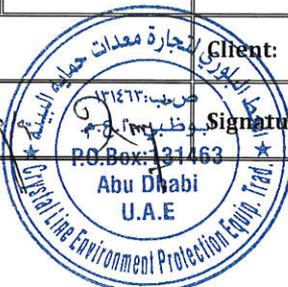
KIDS SPLASH PAD WATER ANALYSIS

PARAMETER	CONTROL LIMITS	WEST FOUNTAIN			
pH	7.2 - 7.6	7.54			
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	409			
TDS, ppm	Max 1000	265			
'P' Alkalinity, ppm as CaCO_3	80 - 120	--			
Total Hardness, ppm as CaCO_3					
Calcium Hardness, ppm as CaCO_3	100 - 500	--			
Chloride, ppm as Cl^-	--				
Iron, ppm as Fe					
Treatment Residuals					
Silica, ppm					
CaH Balance					
Dipslide	<10 ³	ND			
Salinity in mg/l	--				
Free Residual Chlorine as Cl	1.0 - 2.0	1.08			
Cynauric Acid	20 - 60	--			

*** All test results expressed in parts per million (ppm) as CaCO_3 except pH and conductivity (μmhos).

COMMENTS:	ACTION:
The pH levels found are satisfactory ⇨	No action recommended
Chlorine levels are found satisfactory ⇨	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:		





CONSULTING SERVICE REPORT

CUSTOMER: SERCO – NEW YORK UNIVERSITY, ABU DHABI	To: Mr. Ratheesh Muttath Operations Engineer	DATE: 10-02-2020
CUSTOMER ID: 3003	Copy: SERCO - NYUAD	LAST VISIT: 04-01-2020

KIDS SPLASH PAD WATER ANALYSIS

PARAMETER	CONTROL LIMITS	KIDS SPLASH PAD			
pH	7.2 – 7.6	7.60			
Conductivity, $\mu\text{s}/\text{cm}$	Max 1500	402			
TDS, ppm	Max 1000	261			
'P' Alkalinity, ppm as CaCO_3	80 - 120	--			
Total Hardness, ppm as CaCO_3					
Calcium Hardness, ppm as CaCO_3	100 - 500	--			
Chloride, ppm as Cl ⁻	--				
Iron, ppm as Fe					

Treatment Residuals					
Silica, ppm					
CaH Balance					
Dipslide	<10 ³	ND			
Salinity in mg/l	--				
Free Residual Chlorine as Cl	1.0 – 2.0	1.01			
Cynaunic Acid	20 - 60	--			

All test results expressed in parts per million (ppm) as CaCO_3 except pH and conductivity (μmhos).

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:	

