TEST REPORT

REPORT NO:-QMTL/R-79162

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-79162
Reference: **NYUAD**	Sampled By: QMTL Representative	Date Received: 10.11.2019
Sample Description : Main Swimming Pool Sample Onsite Temp: 26°C Sample Receipt Temp: 4°C	Source: Pool	Date(s) Tested: 10-12.11.2019
	Sample Container: 1X 500 ml PB	Date Reported: 14.11.2019
	Sample Appearance: Clear	Date of Sampling: 10.11.2019
On-Site Treatment: NA	Tested by Emp#: 74 & 55	Location: AUH

TEST RESULTS

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

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

P.O.Box: 9035 Abu Dhabi U.A.E.

ANILA GEORGE
LABORATORY MANAGER

END OF REPORT

P.O. Box: 9035, M-15, Plot No. 21, Block C, Store 5, 7&8, Mussafah
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Website: www.qualitasme.com

TEST REPORT

REPORT NO:-QMTL/R-79158

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-79158
Reference: **NYUAD**	Sampled By: QMTL Representative	Date Received: 10.11.2019
Sample Description : Faculty Pool Sample Onsite Temp: 25.8°C Sample Receipt Temp: 4°C	Source: Pool	Date(s) Tested: 10-12.11.2019
	Sample Container: 1X 500 ml PB	Date Reported: 14.11.2019
	Sample Appearance: Clear	Date of Sampling: 10.11.2019
On-Site Treatment: NA	Tested by Emp#: 74 & 55	Location: AUH

TEST RESULTS

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

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

P.O.Box: 9035 Abu Dhabi U.A.E.

ANILA GEORGE
LABORATORY MANAGER

END OF REPORT

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E-mail: info@qualitasme.com
Website: www.qualitasme.com

TEST REPORT

REPORT NO:-QMTL/R-79159

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-79159
Reference: **NYUAD**	Sampled By: QMTL Representative	Date Received: 10.11.2019
Sample Description : Kids Pool Sample Onsite Temp: 25.9°C Sample Receipt Temp: 4°C	Source: Pool	Date(s) Tested: 10-12.11.2019
	Sample Container: 1X 500 ml PB	Date Reported: 14.11.2019
	Sample Appearance: Clear	Date of Sampling: 10.11.2019
On-Site Treatment: NA	Tested by Emp#: 74 & 55	Location: AUH

TEST RESULTS

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

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

P.O.Box:9035 Abu Dhabi U.A.E.

ANILA GEORGE
LABORATORY MANAGER

END OF REPORT

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E-mail: info@qualitasme.com
Website: www.qualitasme.com

TEST REPORT

REPORT NO:-QMTL/R-79160

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-79160
Reference: **NYUAD**	Sampled By: QMTL Representative	Date Received: 10.11.2019
Sample Description :	Source: Jacuzzi	Date(s) Tested: 10-12.11.2019
Jacuzzi Cold Water	Sample Container: 1X 500 ml PB	Date Reported: 14.11.2019
Sample Onsite Temp: 10.6°C	Sample Appearance: Clear	Date of Sampling: 10.11.2019
Sample Receipt Temp: 4°C		
On-Site Treatment: NA	Tested by Emp#: 74 & 55	Location: AUH

TEST RESULTS

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

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

P.O Box: 9035
Abu Dhabi
U.A.E.

ANILA GEORGE
LABORATORY MANAGER

END OF REPORT

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TEST REPORT

REPORT NO:-QMTL/R-79161

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-79161
Reference: **NYUAD**	Sampled By: QMTL Representative	Date Received: 10.11.2019
Sample Description : Jacuzzi Hot Water Sample Onsite Temp: 40.11°C Sample Receipt Temp: 4°C	Source: Jacuzzi	Date(s) Tested: 10-12.11.2019
	Sample Container: 1X 500 ml PB	Date Reported: 14.11.2019
	Sample Appearance: Clear	Date of Sampling: 10.11.2019
On-Site Treatment: NA	Tested by Emp#: 74 & 55	Location: AUH

TEST RESULTS

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

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

P.O.Box: 9035 Abu Dhabi U.A.E.

ANILA GEORGE
LABORATORY MANAGER

END OF REPORT

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E-mail: info@qualitasme.com
Website: www.qualitasme.com

CRYSTALLINE
ENVIRONMENTAL SERVICES

CONSULTING SERVICE REPORT

CUSTOMER: SERCO – NEW YORK UNIVERSITY, ABU DHABI	**To: Mr. Ratheesh Muttath Operations Engineer**	**DATE: 10-11-2019**
CUSTOMER ID: 3003	**Copy: SERCO - NYUAD**	**LAST VISIT: 05-10-2019**

SWIMMING POOL WATER ANALYSIS

PARAMETER	CONTROL LIMITS	MAIN POOL			
pH	7.2 – 7.6	7.55			
Conductivity, µs/cm	Max 1500	762			
TDS, ppm	Max 1000	495			
'P' Alkalinity, ppm as $CaCO_3$	80 - 120	112			
Total Hardness, ppm as $CaCO_3$					
Calcium Hardness, ppm as $CaCO_3$	100 - 500	198			
Chloride, ppm as Cl^-	--				
Iron, ppm as Fe					
Treatment Residuals					
Silica, ppm					
CaH Balance					
Dipslide	$<10^3$	ND			
Phosphate/Phosphonate					
Free Residual Chlorine as Cl	1.0 – 2.0	1.34			
Cyanuric Acid	20 - 60	---			

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

COMMENTS:	ACTION:
The pH found satisfactory. ⇨	No Action Recommended
Chlorine levels are found satisfactory. ⇨	No Action Recommended
Calcium hardness and Alkalinity found satisfactory ⇨	No Action Recommended

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	**Quantity**	**Chemical**	**Present Dosage**	**Revised Dosage**
HTH Chlorine			--	
Pool Acid			--	
Calcium Chloride				
Soda Ash				
Service Engineer:	**Murugaraaj**		**Client:**	**Mr. Ratheesh Muttath**
Signature:	P. Murug		**Signature:**	

Crystal Line Environment Protection Equip. Trad.
P.O.Box:131463
Abu Dhabi
U.A.E

CLEANER WATER GREENER TOMORROW

CRYSTALLINE
ENVIRONMENTAL SERVICES

CONSULTING SERVICE REPORT

CUSTOMER: SERCO – NEW YORK UNIVERSITY, ABU DHABI	**To: Mr. Ratheesh Muttath Operations Engineer**	**DATE: 10-11-2019**
CUSTOMER ID: 3003	**Copy: SERCO - NYUAD**	**LAST VISIT: 05-10-2019**

SWIMMING POOL WATER ANALYSIS

PARAMETER	CONTROL LIMITS	FACULTY POOL			
pH	7.2 – 7.6	7.57			
Conductivity, µs/cm		2330			
TDS, ppm		1514			
'P' Alkalinity, ppm as $CaCO_3$	80 - 120	98			
Total Hardness, ppm as $CaCO_3$					
Calcium Hardness, ppm as $CaCO_3$	100 - 500	468			
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	1.09			
Cyanuric Acid	20 – 60	23			

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

COMMENTS:	ACTION:
The pH levels are satisfactory. ⇨	No Action Recommended.
Chlorine levels are found satisfactory. ⇨	No Action Recommended.
Calcium Hardness levels are satisfactory. ⇨	No Action Recommended.

Kindly add salt granules and pool acid to maintain the desired control parameters in the pool. Sand filter multiport valve is broken and needs to be replaced. Install a standby pump (recirculation) for the faculty pool. The sand media in the filter to be replaced every 2-3 years. Also install an AC inside the plant room.
Upgrade to a chlorine pH pool controller to maintain the chemical levels in the pool.

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:	P. Murug		**Signature:**	

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U.A.E

CLEANER WATER GREENER TOMORROW

CRYSTALLINE
ENVIRONMENTAL SERVICES

CONSULTING SERVICE REPORT

CUSTOMER: SERCO – NEW YORK UNIVERSITY, ABU DHABI	To: Mr. Ratheesh Muttath Operations Engineer	DATE: 10-11-2019
CUSTOMER ID: 3003	Copy: SERCO - NYUAD	LAST VISIT: 05-10-2019

SWIMMING POOL WATER ANALYSIS

PARAMETER	CONTROL LIMITS	KIDS POOL			
pH	7.2 – 7.6	7.53			
Conductivity, µs/cm		2340			
TDS, ppm		1521			
'P' Alkalinity, ppm as $CaCO_3$	80 - 120	98			
Total Hardness, ppm as $CaCO_3$					
Calcium Hardness, ppm as $CaCO_3$	100 - 500	482			
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	1.12			
Cyanuric Acid	20 – 60	25			

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

COMMENTS:	ACTION:
The pH levels are satisfactory. ⇨	No Action Recommended.
Chlorine levels are found satisfactory. ⇨	No Action Recommended.
Calcium Hardness levels are satisfactory. ⇨	No Action Recommended.

Kindly add salt granules and pool acid to maintain the desired control parameters in the pool. The salt chlorinator is faulty and must be replaced. Sand filter multiport valve is broken and needs to be replaced. Install a standby pump (recirculation) for the faculty pool. The sand media in the filter to be replaced every 2-3 years. Also install an AC inside the plant room.

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:	P. Murugaraaj		**Signature:**	

Crystal Line Environment Protection Equip. Trad. P.O.Box:131463 Abu Dhabi U.A.E

CLEANER WATER GREENER TOMORROW

CRYSTALLINE
ENVIRONMENTAL SERVICES

CONSULTING SERVICE REPORT

CUSTOMER: SERCO – NEW YORK UNIVERSITY, ABU DHABI	**To: Mr. Ratheesh Muttath Operations Engineer**	**DATE: 10-11-2019**
CUSTOMER ID: 3003	**Copy: SERCO - NYUAD**	**LAST VISIT: 05-10-2019**

HYDRO POOL WATER ANALYSIS

PARAMETER	CONTROL LIMITS	HOT HYDRO POOL			
pH	7.2 – 7.6	7.57			
Conductivity, µs/cm	Max 1500	606			
TDS, ppm	Max 1000	393			
'P' Alkalinity, ppm as $CaCO_3$	80 - 120	26			
Total Hardness, ppm as $CaCO_3$					
Calcium Hardness, ppm as $CaCO_3$					
Chloride, ppm as Cl^-					
Iron, ppm as Fe					
Treatment Residuals					
Silica, ppm					
CaH Balance					
Dipslide	$<10^3$	ND			
Phosphate/Phosphonate					
Free Residual Chlorine	1.0 – 2.0	<0.05			
Cyanuric Acid	20 - 60	--			

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

COMMENTS:	ACTION:
The pH is found are satisfactory ⇨	No Action Recommended.
Chlorine levels are low ⇨	Add Chlorine Tablets to maintain the chlorine.

Kindly add chorine and pool acid to maintain the desired control parameters in the Hydro Pool. There is no automatic dosing system. Kindly install an automatic dosing system to maintain the desired chemical levels in the system.

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	**Quantity**	**Chemical**	**Present Dosage**	**Revised Dosage**
Crystal Brome			--	
Pool Acid			--	
Crystal Care			--	
Crystal Clear				
Service Engineer:	**Murugaraaj**		**Client:**	**Mr. Ratheesh Muttath**
Signature:			**Signature:**	

P.O.Box:131463 Abu Dhabi U.A.E
Crystalline Environment Protection Equip. Ind.

CLEANER WATER GREENER TOMORROW

CRYSTALLINE
ENVIRONMENTAL SERVICES

CONSULTING SERVICE REPORT

CUSTOMER: SERCO – NEW YORK UNIVERSITY, ABU DHABI	**To: Mr. Ratheesh Muttath Operations Engineer**	**DATE: 10-11-2019**
CUSTOMER ID: 3003	**Copy: SERCO - NYUAD**	**LAST VISIT: 05-10-2019**

HYDRO POOL WATER ANALYSIS

PARAMETER	CONTROL LIMITS	COLD HYDRO POOL			
pH	7.2 – 7.6	7.36			
Conductivity, µs/cm	Max 1500	199			
TDS, ppm	Max 1000	131			
'P' Alkalinity, ppm as $CaCO_3$	80 - 120	27			
Total Hardness, ppm as $CaCO_3$					
Calcium Hardness, ppm as $CaCO_3$					
Chloride, ppm as Cl^-					
Iron, ppm as Fe					
Treatment Residuals					
Silica, ppm					
CaH Balance					
Dipslide	$<10^3$	ND			
Phosphate/Phosphonate					
Free Residual Chlorine	1.0 – 2.0	0.24			
Cyanuric Acid	20 - 60	--			

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

COMMENTS:	ACTION:
The pH is found are satisfactory ⇨	No Action Recommended.
Chlorine levels are low ⇨	Add Chlorine Tablets to maintain the chlorine.

Kindly add chorine and pool acid to maintain the desired control parameters in the Hydro Pool. There is no automatic dosing system. Kindly install an automatic dosing system to maintain the desired chemical levels in the system.

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	**Quantity**	**Chemical**	**Present Dosage**	**Revised Dosage**
Crystal Brome			--	
Pool Acid			--	
Crystal Care			--	
Crystal Clear				
Service Engineer:	**Murugaraaj**		**Client:**	**Mr. Ratheesh Muttath**
Signature:	P. Murug		**Signature:**	

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