

TEST REPORT

REPORT NO:-QMTL/R-79141

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-79141
Reference: NYUAD	Sampled By: QMTL Representative	Date Received: 10.11.2019
Sample Description : ETS- Chilled Water Sample Onsite Temp: 7°C Sample Receipt Temp: 4°C	Source: Valve	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 23 RD EDITION)	UNITS	SPECIFICATIONS	RESULTS
MICROBIOLOGICAL ANALYSIS				
Total Bacterial Count	APHA 9215 B	CFU/ml	10,000	250
Total Coliforms	APHA 9222 B	CFU/100ml	-	Zero
Faecal coliform	APHA 9222 D	CFU/100ml	-	Zero
Pseudomonas aeruginosa	APHA 9213 E	CFU/100ml	-	Zero
Escherichia coli	APHA 9222 H & I	CFU/100ml	-	Zero

REMARKS: The sample meets DM Water Systems quality 2010 specifications for Cooling Water System 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

The test Report shall not be reproduced (except in full) without the written approval of QMTL. When analysis is witnessed by us or carried out by sub contract labs, our responsibility is only to ensure that the analysis is conducted to standard test methods in accordance with industry accepted practice.

END OF REPORT

TEST REPORT

REPORT NO:-QMTL/R-79142

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-79142
Reference: NYUAD	Sampled By: QMTL Representative	Date Received: 10.11.2019
Sample Description : Redundent Chilled Water Sample Onsite Temp: 18°C Sample Receipt Temp: 4°C	Source: Valve	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 23 RD EDITION)	UNITS	SPECIFICATIONS	RESULTS
MICROBIOLOGICAL ANALYSIS				
Total Bacterial Count	APHA 9215 B	CFU/ml	10,000	<1
Total Coliforms	APHA 9222 B	CFU/100ml	-	Zero
Faecal coliform	APHA 9222 D	CFU/100ml	-	Zero
Pseudomonas aeruginosa	APHA 9213 E	CFU/100ml	-	Zero
Escherichia coli	APHA 9222 H & I	CFU/100ml	-	Zero

REMARKS: The sample meets DM Water Systems quality 2010 specifications for Cooling Water System 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

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END OF REPORT

TEST REPORT

REPORT NO:-QMTL/R-79172

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-79172
Reference: NYUAD	Sampled By: QMTL Representative	Date Received: 10.11.2019
Sample Description : MTER Chilled Water Sample Onsite Temp: 11°C Sample Receipt Temp: 4°C	Source: Valve	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 23 RD EDITION)	UNITS	SPECIFICATIONS	RESULTS
MICROBIOLOGICAL ANALYSIS				
Total Bacterial Count	APHA 9215 B	CFU/ml	10,000	6
Total Coliforms	APHA 9222 B	CFU/100ml	-	Zero
Faecal coliform	APHA 9222 D	CFU/100ml	-	Zero
Pseudomonas aeruginosa	APHA 9213 E	CFU/100ml	-	Zero
Escherichia coli	APHA 9222 H & I	CFU/100ml	-	Zero

REMARKS: The sample meets DM Water Systems quality 2010 specifications for Cooling Water System 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

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LABORATORY MANAGER



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END OF REPORT

TEST REPORT

REPORT NO:-QMTL/R-79163

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-79163
Reference: NYUAD	Sampled By: QMTL Representative	Date Received: 10.11.2019
Sample Description : RTER Chilled Water Sample Onsite Temp: 13°C Sample Receipt Temp: 4°C	Source: Valve	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 23 RD EDITION)	UNITS	SPECIFICATIONS	RESULTS
MICROBIOLOGICAL ANALYSIS				
Total Bacterial Count	APHA 9215 B	CFU/ml	10,000	<1
Total Coliforms	APHA 9222 B	CFU/100ml	-	Zero
Faecal coliform	APHA 9222 D	CFU/100ml	-	Zero
Pseudomonas aeruginosa	APHA 9213 E	CFU/100ml	-	Zero
Escherichia coli	APHA 9222 H & I	CFU/100ml	-	Zero

REMARKS: The sample meets DM Water Systems quality 2010 specifications for Cooling Water System 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

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END OF REPORT



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

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	ETS			
pH	9.0 - 10.5	9.77			
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1884			
TDS, ppm	--	1223			
'P' Alkalinity, ppm as CaCO_3	--				
Total Hardness, ppm as CaCO_3	--				
Calcium Hardness, ppm as CaCO_3	--				
Chloride, ppm as Cl^-	--				
Iron, ppm as Fe	0 - 2.0	0.19			

Treatment Residuals

Nitrite, ppm	> 800	830			
CaH Balance					
Dipslide	<10 ³	ND			
Phosphate/Phosphonate					
Free Residual Chlorine as Cl	--	--			
Cynauric Acid					

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

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

The chilled water controller is calibrated. Dosing pumps, tubes and tank are in good condition.

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
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: 10-11-2019
CUSTOMER ID: 3003	Copy: SERCO - NYUAD	LAST VISIT: 05-10-2019

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	Redundant			
pH	9.0 - 10.5	9.75			
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	2980			
TDS, ppm	--	1937			
'P' Alkalinity, ppm as CaCO_3	--				
Total Hardness, ppm as CaCO_3	--				
Calcium Hardness, ppm as CaCO_3	--				
Chloride, ppm as Cl^-	--				
Iron, ppm as Fe	0 - 2.0	0.06			

Treatment Residuals					
Nitrite, ppm	> 800	1480			
CaH Balance					
Dipslide	<10 ³	ND			
Phosphate/Phosphonate					
Free Residual Chlorine as Cl	--	--			
Cynauroic Acid					

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

COMMENTS:	ACTION:
The pH and Conductivity/TDS are found satisfactory. \Rightarrow	No action recommended.
Dissolved iron levels are satisfactory. \Rightarrow	No action recommended.
Corrosion Inhibitor levels satisfactory \Rightarrow	No action recommended.

The chilled water controller is calibrated. Dosing pumps, tubes and tank are in good condition.

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
Service Engineer:	Murugaraaj	Client:	Mr. Ratheesh Muttath	
Signature:	P.M.	Signature:		





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

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	MTER			
pH	9.0 - 10.5	9.86			
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	1949			
TDS, ppm	--	1266			
'P' Alkalinity, ppm as CaCO_3	--				
Total Hardness, ppm as CaCO_3	--				
Calcium Hardness, ppm as CaCO_3	--				
Chloride, ppm as Cl^-	--				
Iron, ppm as Fe	0 - 2.0	0.34			

Treatment Residuals

Nitrite, ppm	> 800	910			
CaH Balance					
Dipslide	<10 ³	ND			
Phosphate/Phosphonate					
Free Residual Chlorine as Cl	--	--			
Cynaunic Acid					

All test results expressed in parts per million (ppm) as CaCO_3 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.
Corrosion Inhibitor levels found satisfactory.	⇒	No action recommended.

The chilled water controller is calibrated. Dosing pumps, tubes and tank are in good condition. Corrosion inhibitor sensor are ok.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
			--	
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: 10-11-2019
CUSTOMER ID: 3003	Copy: SERCO - NYUAD	LAST VISIT: 05-10-2019

CHILLED WATER ANALYSIS

PARAMETER	CONTROL LIMITS	RTER			
pH	9.0 - 10.5	9.30			
Conductivity, $\mu\text{s}/\text{cm}$	Max 3500	2480			
TDS, ppm	--	1612			
'P' Alkalinity, ppm as CaCO_3	--				
Total Hardness, ppm as CaCO_3	--				
Calcium Hardness, ppm as CaCO_3	--				
Chloride, ppm as Cl^-	--				
Iron, ppm as Fe	0 - 2.0	0.07			

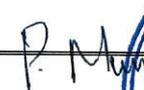
Treatment Residuals

Nitrite, ppm	> 800	1190			
CaH Balance					
Dipslide	<10 ³	ND			
Phosphate/Phosphonate					
Free Residual Chlorine as Cl	--	--			
Cynauric Acid					

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

COMMENTS:	ACTION:
The pH and Conductivity/TDS are found satisfactory. \Rightarrow	No action recommended.
Dissolved iron levels are satisfactory. \Rightarrow	No action recommended.
Corrosion Inhibitor levels found satisfactory \Rightarrow	No action recommended.

The chilled water controller is calibrated. Dosing pumps, tubes and tank are in good condition.

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal 5547C			--	
Crystal 9040			--	
Service Engineer:	Murugaraaj		Client:	Mr. Ratheesh Muttath
Signature:			Signature:	

