

TEST REPORT

REPORT NO:-QMTL/R-80989

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-80989
Reference: ADIA – CAR PARKING	Sampled By: QMTL Representative	Date Received: 20.11.2019
Sample Description: Cooling Tower – Make Up Water Sample Onsite Temp: 25°C Sample Receipt Temp: 4°C	Source: Valve	Date(s) Tested: 20-22.11.2019
	Sample Container: 1x500 ml PB	Date Reported: 26.11.2019
	Sample Appearance: Clear	Date of Sampling/Time: 20.11.2019/07.58 PM
On-Site Treatment: NA	Tested by Emp#: 55 & 74	Location: AUH

TEST RESULTS

PARAMETERS	TEST METHODS (APHA 23 RD EDITION)	UNITS	SPECIFICATIONS	RESULTS
MICROBIOLOGICAL ANALYSIS				
Total Bacterial Count	APHA 9215 B	CFU/ml	500	<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 Hot & Cold Water Systems 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#: 72

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-80987

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-80987
Reference: ADIA – CAR PARKING	Sampled By: QMTL Representative	Date Received: 20.11.2019
Sample Description: Level 06, Cooling Tower - 1 Sample Onsite Temp: 23°C Sample Receipt Temp: 4°C	Source: Cooling Tower	Date(s) Tested: 20-22.11.2019
	Sample Container: 1x500 ml PB	Date Reported: 26.11.2019
	Sample Appearance: Clear	Date of Sampling/Time: 20.11.2019/07.45 PM
On-Site Treatment: NA	Tested by Emp#: 55 & 74	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 Systems 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#: 72

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-80988

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-80988
Reference: ADIA – CAR PARKING	Sampled By: QMTL Representative	Date Received: 20.11.2019
Sample Description: Level 06, Cooling Tower - 3 Sample Onsite Temp: 24°C Sample Receipt Temp: 4°C	Source: Cooling Tower	Date(s) Tested: 20-22.11.2019
	Sample Container: 1x500 ml PB	Date Reported: 26.11.2019
	Sample Appearance: Clear	Date of Sampling/Time: 20.11.2019/07.55 PM
On-Site Treatment: NA	Tested by Emp#: 55 & 74	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	210
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 Systems 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#: 72

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

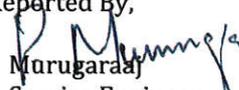
COOLING TOWER ANALYSIS REPORT

Client Name: SERCO, MIDDLE EAST			
Site location	ABU DHABI INVESTMENT AUTHORITY, ABU DHABI	Service Visit:	20/11/2019
Sampled By	Crystalline Rep	Sample Location	ADIA - Car Parking
Sample Type	Cooling Tower		

TEST RESULT							
	Parameter	Control limits	Make up water	Cooling tower -1	Cooling tower-2	Cooling tower -3	Cooling tower -4
1	pH at 25°C	8.5-9.5	7.89	9.08	---	8.65	---
2	Conductivity at 25°C, µs/cm	Max 1500	182	1084	---	1096	---
3	Total Dissolved Solids (TDS)	Max 1000	118	704	---	714	---
4	Residual Chlorine	0.2 - 0.5	0.05	<0.05	---	<0.05	---
5	Calcium Hardness	200-350	54	332	---	346	---
6	Chlorides	Max 200	33	194	---	210	---
7	Iron	0 - 2.0	<0.03	0.1	---	0.09	---
8	Phosphate/phosphonate	4 - 6	---	5.5	---	6.3	---
9	Cycles of concentration	5 - 6	---	5.5	---	6.7	---
10	Calcium hardness balance	0.95 - 1.05	---	1.10	---	0.94	---
11	Dip slide	<10 ³	ND	ND	---	ND	---

*** All test results expressed in parts per million (ppm) as CaCO₃ except pH and conductivity (µmhos).

COMMENTS AND RECOMMENDATIONS				
	Cooling Tower-1	Cooling Tower-2	Cooling Tower-3	Cooling Tower-4
1	PH Level is satisfactory	----	PH Level is satisfactory	----
2	Conductivity & TDS levels are satisfactory	----	Conductivity & TDS levels are satisfactory	----
3	Calcium Hardness and Chloride levels are satisfactory	----	Chloride levels are slightly high -Please drain the water	----
4	Dissolved iron levels are satisfactory	----	Dissolved iron levels are satisfactory	----

Reported By,

 Murugaraaj
 Service Engineer

